Tractatum hunc cui Titulus

THE

PRETERNATURAL STATE

OF

Animal Humours, &c.

Dignum judicamus qui Imprimatur.

Samuel Collins, Præses.

Tho. Burwell,
Rich. Torlesse,
Will. Dawes,
Thom. Gill,
} Censores.

Dat. in Comitiis Censoriis
ex Ædibus Collegii nostri,
Dec. 6. 1693.

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4 26.55

THE Preternatural State OF ANIMAL HUMOURS DESCRIBED, BY THEIR Sensible Qualities,

Which depend on the different degrees of their *Fermentation*. And the Cure of each *particular Cacochymia* is performed by Medicines of a peculiar *Specific* Taste, described.

To this Treatise are added

TWO APPENDIXES.

I. About the Nature of *Fevers*, and their Ferments, and Cure by particular Tastes.

II. Concerning the Effervescence and Ebullition of the several *Cacochymia's*; on which all *Inflammations*, *Tumours*, *Pains*, and *Flowers* of *Humours* depend; especially those in the Gout and Bilious; and the particular *Tastes* of the *Medicines* curing *Ebullitions*, are described.

By the Author of the Φαρμακο Βάζανος.

LONDON,

Printed by *W. Downing*, for *Michael Johnson*. And are to be Sold by *Robert Clavel*, *Sam. Smith*, and *Benjamin Walford*, in St. *Paul's Church-Yard*, 1696.

TO THE

Much Honoured

Sir Charles Holt, Bart.

at *Aston* in *Warwick-shire.*

Sir,

YOUR great *Skill* and *Judgment* in the Practice of *Physick*, is so well known to all Your Countrey, as well as to many of the Learned'st of Our Faculty, that I can need no

Apology

Apology for the Dedication of a *Physical Treatise* to You.

If I Reflect on those Favours I have received from Your Honoured Family, they may justly claim this Expression of my Gratitude for Them: But I think my self most particularly Obliged to make this Publick Acknowledgement of those great Advantages I have had by Your Learned Conversation.

Your *Chymical* Experiments have given me clear Notions

Notions of the *Principles* of many particular *Bodies*, and their *Sensible Qualities*, by *Anatomical Dissections*. You have procured for me some *Animal Humours* to Taste and Examine, and by Your *Microscopes*, I have observed more of the *Consistence* of *Fluids* than I could otherways have known.

These *Notions* which I have present You, were the Subject of our frequent Conferences, and I never liked any of them so well as those Your Judgment approved of.

When

When Your Kindneſs to Your *Neighbours*, or Charity to the *Poor*, Obliged You to preſcribe *Phyſick*, (which frequently You do) I have obſerved, when I was called to any Conſultation with You, Your exact Judgment in diſtinguiſhing the niceſt Caſes, Your Rational Preſcriptions, grounded on the true Indications, taken from the Hiſtory of the particular Caſe, and directed againſt the Cauſe of the *Diſeaſe*; and alſo, Your great Value for

Simple

Simple Medicines, preſcribed in their due Quantity; and I can moſt truly affirm, That a great Succeſs always attended this rational Practice.

Sir, Your exact Judgment in *Phyſick* deſerves the higheſt Expreſſions of Eſteem from the moſt Ingenious Writers in our *Art*; but I muſt depend on that great Candor and Civility You conſtantly expreſs to Our whole *Faculty*, for Your Accepting of the *Patronage* of theſe *Papers* which are

Preſented by Him who has a real Value both for Your *Vertue* and *Learning*; and who am,

SIR,

Your moſt Humble

And Faithful Servant,

JOHN FLOYER.

Lichfield,
July 26
1695.

THE

THE PREFACE.

IT is very reaſonable, That the preſent Age ſhould admit all the ſenſible Obſervations made on Human Bodies *by the preceeding. And thoſe it ought farther to explain and illuſtrate by the* Philoſophy *of the preſent times; for that of every Age ſoon alters, and the Variety of* Hypotheſes, *and Terms, confounds all Ordinary Readers; and the preſent being ſo extravagantly different from thoſe of Ages very remote, the* Old Authors *become moſt unacceptable to the* Moderns; *but they who are converſant in all the* Natural Phænomena *will eaſily take the Senſe both of the* Old *and* New Writers, *and give a candid Cenſure of* Both.

My Deſign in this Treatiſe, *is, To explain* Animal Humours *by the Obſervations given of them by the* Ancients, *as well as by thoſe Improvements made by* Modern Philoſophy, Chymiſtry, *and* Anatomy.

The Ancient Phyſicians *explained* Animal Humours *by* ſenſible Qualities; *and alſo their* Morbid State *by the ſame.*

By the Touch *they explained the* Heat, *which ſhews us the* high degree *of* Fermentation *in our* Humours; *and the* Cold *intimates the* Depreſſion *of our* Natural Fermentation.

By the ſame Senſe they obſerved the Moiſture, *by which we underſtand the* Fulneſs *of the* Habit *of the* Body, *and intimates a* Plethoric *State of* Humours; *and the* Dryneſs *of our* Bodies *is evident in* thin, lean Habits, *where the* Nutritious Juyces *are deficient.*

Becauſe a high Fermentation *or* Digeſtion *may happen in a* full, moiſt Habit, *or a* lean, thin One, *and a* low Fermentation *may happen in both, they have therefore obſerved various Compoſitions of our* Conſtitutions, *not diſagreeable to the Nature of them, which depend on the particular* Digeſtion, *and quantity of our* Humours, *and not immediately on any Mixture of* Qualities *and* Elements; *for particular* Bodies, *ſuch as* Plants *and* Animals, *cannot be explained by thoſe general* Elements, *which conſtitute the great* Maſs *of* Matter *in the World; but both have their* Origin *from ſome* Matter *prepared.*

By Fermentation *or* Digeſtion, *Plants theirs from a* Bituminous Nutriment; *and* Animals *theirs from an* Albuminous Liquor.

Chyle *was not eſteemed by the* Ancients *any of the* Humours; *but from it they deduced the ſeveral* Humours *conſtituting the* Blood.

The

The Red *Part of* Blood *they moſt particularly called* Blood, *which tinges the whole* Maſs, *and makes the* Blood *and* Face *florid. They deſcribed it as* hot, moiſt, *and* ſweet; *and by theſe contrary Taſtes*, viz. *the* Cold, *the* Dry, *the* Bitter, *they uſed to correct it.*

The Choler *they obſerved by the* Yellowneſs *in the* Arterial Blood. *They deſcribed it as* hot, fiery, bitter, acrid, *and* dry; *and to correct it, they uſed the* Cold *and* Moiſt *Taſtes: But we obſerve, as the* Salſo-Acid *of* Urin *corrects* Coloquintida Bitterneſs, *ſo the* Salt *of* Blood *and* Chyle *alters the Taſte of the* Choler *mixed with both, and makes it* ſweet *or* inſipid; *and* Lixiviums *have the ſame effect on* Choleric Humours.

The Bilis Nigra *made the* Body, *and* Blood, *and* Spleen black, cold, dry, *and* Humours acid; *and by the* warm, ſweet *and* humid *Taſtes they corrected it. They obſerved that* Blackneſs *was given to* Oyly Humours *by* Aduſtion.

Phlegm *was deſcribed, as the* coldeſt Humour, ſweet, *and* moiſt, *and preternaturally* acid, *and* ſalt; *and theſe they eſteemed the* Matter *of all* Defluxions, *as, in reality, the* lacteal *and* ſerous Lympha's *be; but the* ſweet Phlegm *is the* chylous Liquor. *The* hot *and* dry *Taſtes are contrary to* Phlegm.

They observed, That Heat *corrects* Cold; Moisture, Dryness; *and* sweet *and* oyly *things, the* Acerbity *and* Austerity *of* Humours.

Though the Serum *and* fibrous Cake *of the* Blood *were the chief Parts of the* Mass *of* Blood, *and well known to the* Ancients, *yet it did not agree with their* Hypothesis *to make* them Principles *of the* sanguineous Mass; *but the mentioned* Humours, *by exceeding in quantity or quality, produced these several* Cacochymia, *and* Defluxions *of* Humours.

The Old Writers *wanted a full Knowledge of* Fermentation, *by which the chief* morbid *Alterations are produced in the* Humours; *and they attributed their preternatural State either to* Crudity *of* Digestion, *or* Adustion.

There is a remarkable Instance in Galen, *which shews most plainly a Notion, not much different from* Wine, *about the Preparation of our* Humours, *viz.*

The Blood *is in the middest of those* Humours *we call* bilious; *and those whose* Genus *is called by one Name, the* crude Humour *or* Phlegm; *for they are produced by* over-digestion *of* Blood; *but these by its imperfect* Digestion; *and there are innumerable differences of both kinds. And in another place he asserts, That both* Biles *are from an* Excess *of* Heat, *and* Acidity *from* Indigestion, *and* Saltness *from* Putrefaction.

A pure Temperament *is only an* Idæa *of Fancy; but that which comes neareſt to it, is the* ſanguineous Conſtitution, *in which there is the moſt exact* Digeſtion *of* Humours; *and becauſe there is alſo the greateſt* Sweetneſs *of them, there is generally a* Fulneſs *of the* Habit *of the* Body *from the quantity of* Nutriment, *and a* Floridity *in the* Face *from the good* Digeſtion *of the* Red *part of the* Blood; *and here the* Nutritious Humours *are moſt free from thoſe ill qualities, which make them unapt to aſſimilate, or which ſtimilate the* Senſible Parts *to evacuate them out of the* Body.

The various natural Conſtitutions *or* Qualities *in* Wines, *reſemble the various* Temperaments *of our* Humours, *which, like them, depend on ſome certain degree of* Fermentation *natural to both; and becauſe that degree of* Digeſtion *cauſes ſometimes the* watery *or* ſlimy, *ſometimes the* acid *or* acerb, *or the* oyly Sweetneſs, *to predominate, the* Ancient Writers *believed that this depended on the greater Mixture of ſome of the* Elements.

The Crude Wines, *are the* Wateriſh, *the* Auſtere, *the* Acerb, *the* Pendulous *or* Slimy, *the* New, Sweet, Flatulent; *but thoſe* Wines *which depend on a very* high Digeſtion *of* vegetable Juyces, *are the* bitter Wines, *the* old, hot, ſpirituous *and* ſharp; *the* fæculent, viſcous *or* thick; *the* fragrant *or* fœtid. *Many*

Many of these ill qualities are produced in Wines *by* long Keeping, *or* preternatural Preparations *of them.*

By a weak Fermentation *a* pendulous Sliminess *is produced, which answers a* pituitous *State, or an* Acerbity, *which resembles the* Tartar *of our* Humours, *or* Watersishness, *which is like the* Serosity *of our* Blood.

By over-Fermentation, *or* long Keeping, Wine *becomes* bitter, *as the* Cæcubum; sharp, *as in* Hock, *like the* vitriolic Acidity; *they grow* thick, *like the* Viscidity *of our* Humours; *or* fœtid, *like the* putrid *State of them.*

These are the preternatural *States of* Wines, *and* Animal Humours, *occasioned by various* Fermentations, *which* Galen *observed, when he explains the* Alteration *of* Humours *by* new, sweet Wine *fermenting by its own* Heat; *and he compares the* Effervescence *on the* Wine *to* Choler, *and the* Fæces *to* Melancholy.

Many Phænomena *may more easily be explained now, than they could be in former Ages, when the* Circulation *of* Humours, *the* fermentative Dissolution *of our* Meats, *and the* Defluxions *through particular* Glands, *were unknown.*

The Motion *of particular* Humours *was accounted for, by the* Old Writers, *by the* Attraction *of* Parts, *which drew their like; but the* Pulse, *which circulates several* Humours,

as

as well as the Blood, *better explains all the* Motion *of* Humours.

Galen *obſerves Two Species of* Styptics; *and that the* Styptic *Quality is greater in the* Acerb, *than the* Auſtere; *but the Explication of the Virtues of* Specific Medicines *he imputes to their Subſtance, which may be more eaſily made by the particular* Taſte *of them, which raiſes or depreſſes the* Fermentation *of* Humours, *and they frequently have a Similitude or Contrariety to the* Secretitious Humours *in* Taſte *and* Quality.

The Ancients *imputed* Sanguification *to the* Liver; *but we, more properly, to the* Gall, *and a Mixture of the* Salt Lympha's, *and alſo a long* Circulation *with the* Blood *it ſelf.*

The Digeſtion *of* Meat *was explained by* Heat, *which the* Moderns *more clearly deduce from a* Fermentation *which half putrefies the* Food, *and diſſolves it out of its* hollow Fibers, *whether they be* Animal *or* Vegetable; *for it is their* Juyces *chiefly which are our* Food; *for the* ſolid Parts turn into *Excrements.*

But the beſt Explication we can yet give of the Vital *and* Animal Spirit, *is not much different from that of* Galen, *who affirms, That the* Vital Spirits *are bred in the* Arteries *and* Heart, *and that the* Matter *of them is from the* Air *inſpired, and the* Vapours *of the* Blood,

and that the Animal Spirits *are made out of the* Vital.

This Hypotheſis *is more fully explained in another Book aſcribed to* Galen, de uſu Reſpirationis; Conſtat autem vires corporis eſſe ex nervorum tenſione, cauſa autem tenſionis nervi nulla eſt alia quam ſpiritus nervum inflans — ſpiritum autem voca, non ſolum vaporem ſanguinis, ſed etiam aerem inſpiratum, qui ei admiſcetur.

The innate Heat *differs not from the* Vital Spirit, *which he deduces from an* unctuous Humour *in the* Blood, *after the ſame manner as* Flame *is produced from the* Oyl *of a* Lamp, *and both are in a continual Motion, like the* Water *of a* River.

All the Eructations *he imputes to the* Air, *which, mixed with our* Meats, *create* Wind, *and this* Air *paſſes included in the* Pores *both of our* ſolid *and* liquid Meats; *and this, upon* Fermentation *of our* Food, *is intermixt with its* light *or* volatile Parts, *and gives them that* Elaſticity *obſervable in all* fermented Liquors; *and theſe* Elaſtic Particles *give a* ſtrong Pungency *to the* Taſte, *and a* ſtrong Odor *to the* Smell: *Theſe rareſie* fermented Liquors *into* Bubbles, *and give the great force in breaking their* Veſſels; *and theſe eaſily evaporate into* Air, *having that naturally in their Mixture*; *but*

but that the Spirits *are not purely* Aerial, *is evident, because they both Smell and Taſte of their* Vegetable. *Theſe* Spirits *we artificially ſeparate in Diſtilling* Brandy Spirits, *which are evidently* light, oyly *Parts mixt with a* volatile Acid.

Windy Spirits *we commonly experience upon the* Digeſtion *of our* Meats *in the* Primæ Viæ, *and there we feel* Inflations, *and find* windy Bubbles *in the* Contents *of the* Inteſtines; *and we obſerve no* Liquor *ſo full of them, as the fermented be.*

All ſpirituous Liquors *of* Vegetables *inflame our* Animal *and* Vital Spirits, *by producing an* Efferveſcence *and* Heat *in the* Blood, *and ſome Affection in the* Nerves, *of* Tremor, Stupidity, *or* Giddineſs. *And ſince our* Juyces *are made of the* Vegetable, *they are probably fermentiſcible like them.*

The Semen *puts Females into a* Fever *upon* Impregnation; *and all* Animal Humours *which poyſon, are* putrefying Ferments. *The* Eggs *of* Inſects *ferment the* Juyces *of the* Plants, *into which they are inſerted; and there are many* Poyſonous Plants *which certainly affect both the* Blood *and* Spirits *of* Animals, *which produce both* Fever *and* Delirium. *The greateſt* Poyſon *for* Darts, *is believed to be made of* putrid Humours.

It

It seems impossible to the Ancients, *to impute the sudden* Running *of* Pains *to any other Cause; but some of our* Humours *rarefied into* Spirits, *or* Vapours. Melancholy Distempers *are deduced from* Spirits *drawn from that* Cacochymia. *The* Phrenitis *from* Choleric Spirits, *and the* Epilepsie *from* Fumes.

As to the use of the Brain, Galen *observes, That the* Skins, *and outward Part of the* Brain, *may be cut away without loss of* Sense *or* Motion; *but when the* Medullary *Part of the* Brain *or* Nerves *is wounded, both perish.*

He asserts, That the Nerves *bring the Faculty of* Motion *to the* Muscles, *by this Experiment; If a* Nerve *be cut, or the* Spinal Marrow, *all the* Parts *below the Incision lose their* Sense *and* Motion, *but those above preserve it.*

He was as much perplexed about the Porosity *of the* Nerves, *as the* Moderns; *but neither can otherways explain the* Diseases *of the* Nerves, *than by supposing some* Aerial, *and* inmate Animal Particles, *like* Vapours, *passing through the* Nerves, *to give them a* Tension. *And as no Age could ever doubt of the* Passage *of the* Chyle *into the* Blood, *before the Discovery of the* Lacteals; *so we are forced to confess the* Contents *of the* Nerves, *though we can no way discern them; for, upon the Death of an* Animal, *the* Spirits *may readily sink into the* Muscles,

or

or Veins, *or* Lymphatics, *and* Glandules; *or else be so* Aerial, *as many* Liquors *be, which evaporate upon the least approach of* Air; *or else their* Minute Canals *suspend their* Liquors, *as small* Glass-Pipes *do: But it seems most probable, That proper Experiments have not yet been made, by* Ligature *or* Incisions, *in* Living Animals, *which might demonstrate the* Nervine Lympha; *and it is impossible, at present, for us otherwise to explain the* Nature *of the* Spirits, *than by comparing them to* Air *or* Fire, *till we can, by some lucky Experiment, discover the* Contents *of the* Nerves, *and their* particular Qualities.

I have added Two Appendixes *to this* Treatise *of* Animal Humours; *The* First *describes the* Nature *of* Fevers, *and their* Ferments; *and the* Second *deduces many* Diseases *from the* simple Ebullition, Effervescence *or* Orgasmus *of the* Blood, *on which most* Inflammations, Tumours, Pains, *and* Fluxes *of* Humours, *depend*; *and without a due respect to that* Effervescence, *none of the mentioned* Diseases *can be rationally cured. In the* ensuing Treatise *I have endeavoured to explain the Opinion of the* Ancients, *in all their Discourse of* Fevers; *but we are obliged to the Ingenious* Car. Piso, *for giving the first hint of* Diseases *depending on an* Effervescence *of the* Serum; *but*

but that wanted a farther Explication, becauſe he knew not the Circulation *of* Humours, *nor the* Uſe *of the* Glands, *nor the true* Nature *of the* Serum *of the* Blood, *and that the* Effervescence *is in the* Maſs *of* Blood, *and the* Serum *has only a* violent Motion *given by the* Ebullition, *which forces it to paſs thoſe* Glands, *through which the* Fluxion *is made; and that* Pains *cauſe* Fluxions, *only by ſtopping the* Circulation *of* Humours, *by contracting the* Veſſels, *by help of the* Convulſed Nerves; *and that all* Tumours *happen by the* Obſtruction, *or* Stagnation *of* Humours *in the* Circulating Veſſels.

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What

What Mistakes have happened I desire may be corrected by the Errata's *here annexed.*

PAg. 11. l. 2. it ought to run thus, *The Fat is produced from the Buttery part of Chyle.* p. 26. after, and that depends on, is omitted in the last Line *secretitii.* 33. l. 18. the stop after *sometime.* 43. l. 6. *so they are,* r. *which are.* l. 11. *cold* not *old.* 44. l. 21. dele *as in Rhue.* 45. l. 2. r. *Cure* instead of *are.* l. 11. *one drachm* not *one Ounce.* l. 19. *Catchup,* divide it from *Mango.* l. 48. omit the *Comma* betwixt *Milk* and *Water.* 49. l. 13. for *which Flames,* r. *with Flannel.* 53. l. 10. dele *so.* 66. l. 18. r. *pungent.* 83. l. 25. r. *compare.* 95. l. 21. r. *Hog Fenil.* 96. l. 20. r. *acid* not *acrid.* 102. l. 16. r. *for* not *fat.* 107. l. 25. r. *rapid.* 112. l. 22. r. *fat Cows,* not *Faulcon.* 114. l. 14. r. *Flowers,* not *Flames.* 117. l. 10. *no breach.* 127. l. 15. r. *soon,* not *some.* 129. l. 1. r. *the.* 155. l. 24. r. *are.* 157. l. 17. r. *preter,* not *pretty.* 171. l. 8. r. *Stomach,* not *Sumach.* 181. l. 2. r. *Onions,* not *Crocus.* 188. l. 24. r. *from,* not *above.* 199. l. the last. r. *Aq. Panatæ.* 191. l. 1. r. *mild,* not *wild.* 202. l. 1. θερμάτερον. 206. l. 22. dele *as.* 208. l. 28. r. *of,* not *or.* 209. l. 21. add *less.* 211. l. 11. r. *for,* not *so.* 224. l. 2. r. *Bursa pastoris.* dele *and.* 260. stop after *Italy, the,* not *they.* add *of* after *use.* 261. l. 6. r. *Oxymels.*

THE Preternatural State OF *ANIMAL HUMOURS* described, &c.

CHAP. I.

Of Diseases *in General, and particularly of those of the* Solid Parts.

THE Ancient Doctrine of *Hippocrates*, divided the Parts of an *Animal*, into the *Containing* and *Contained*: The *Containing* are the *Vessels*, and the Parts *Contained* are the *Humours*, amongst which we reckon the *Spirits*, which are also of a *Fluid Nature*.

The *Anatomy* of an *Embryo* evidently confirms this *Doctrine*; for at its first formation and increase in the *Egg*, there appears nothing but *Humours* and *Membranes* containing them, which are plainly of a *Nervous Nature*.

The first *Stamina* which appear in an *Embryo* after Incubation, are probably the *Arteries*, which have some *Pulse*; and from these arise all the *Viscera* and *Vessels*, as *Veins*, *Lymphatics*, *Nerves*, and *Glandules*.

The *Veins*, in which the thicker Mass circulates; the *Lymphatics* into which the *Serum* of the Blood is received from the *Arteries*: The *Glands* (which are *Conglomerate*) are *vascular*, and are prolongations of the *Arteries* designed for the secretion of *Humours*; the *Brain* is also *vascular*; and the *Nervous Fibrillæ* also, like the other *Lymphatics*, receive a clear *Lympha* from the *Arteries*, and seem to return their *Nervous lympha* by the *conglobate Glands* into the *Lymphatics*; the substance of the *Spleen*, *Kidneys*, and *Liver*, is also *Glandulous*, arising from the *Arteries*.

Since the *Arteries* not only appear first in an *Embryo*, but also they supply all the other Vessels with their several Liquors, I do not improbably assert, That they are the Root of all the Animal Vessels and Solid Parts.

The *Fibrillæ* of the Brain compose the several *Membranes* of the Body, which cover the *Vessels*, *Viscera*, and constitute the substance of the *Lungs*, *Guts*, *Stomach*, *Skin*; and the Flesh of all the *Muscles* is made up of these *Membranous Fibers*, which their *Membranous Tendons* evidently prove. Nothing is observed

ved in an *Embryo*, more hard, firm, and ſolid, than its *Membranes*; ſo that its *Bones*, *Teeth*, *Nails*, *Hair*, and *Horns*, were at firſt tender *Membranous Fibrillæ*, ſtuffed with a *viſcid Nutriment*, from which they have their *rigidity* and *hardneſs*; ſo the Woody ſubſtance of *Vegetables* is only a bundle of hollow tender Pipes; and after the ſame manner the ſolidity of the parts of *Animals* may be produced.

By the preceeding Deſcription we may obſerve, that all the Parts of the Body are originally of the ſame *Membranous* or *Nervous* Nature, and therefore they are really to be accounted *Similar*, and from the various conformation of the *Similar Parts*, and their complications, ariſe all the *Diſſimilar Parts*; ſo from the *Veins*, *Nerves*, *Bones*, *Membranes*, all the *Organical* Parts are framed, which are deſigned for ſenſible Impreſſions, as the *Eye*, or *Ear*, &c. or ſome *Animal Motion*, as the *Muſcles*; or the Preparation of the *Animal Humours*, as the *Stomach* and *Guts*; or the *Secretion* of them, as the *Glandulous Viſcera*.

Since all the *Animal Parts*, are either Veſſels which make the *Solid Parts*, or elſe *Humours* and *Spirits*, which make the *Fluid*, I will divide all the Diſeaſes of an *Animal* according to thoſe Parts; *viz.* into,

1. The Diſeaſes of the *Solid Parts.*
2. The Diſeaſes of the *Humours.*
3. The Diſeaſes of the *Spirits*, which are the moſt *Fluid*, or *Aerial Parts* of our *Humours.*

1. The *Intemperies* of the *Solid Parts*, depends on,

1. The *Humours* circulating through them, as the *Blood* and *Spirits*, and they communicate either a ſenſe of *Heat* or *Coldneſs* to them. A dry *Intemperies* is only a defect of the *Nutritious Juices*, and a moiſt *Intemperies* a fulneſs of the *Nutritious Liquor.*
2. The *Humour* which nouriſhes the *Solid Parts*, muſt give them their quality with their *Nutriment*; an oyly hot *Blood* will give a *Nutriment* of the ſame quality: An *Acid Nutriment* will produce a *Coldneſs* in the Parts, a *Viſcid Nutriment* gives a *Dryneſs*, and a *Serous* an *Hydropical Humour.* And ſince the *Intemperies* depends on thoſe *Humours*, the correcting of their ſeveral *preternatural* States, cures all theſe *preternatural* diſpoſitions of the *Similar Parts*; for theſe may be eſteemed as Symptoms depending on the other, and need not be more particularly Treated of. But I will only add, that the *Tranſient Intemperies* depends on the *circulating*

culating Humours, and is ſoon altered, but the *permanent*, which depends on *nutriment*, more difficultly.

2. The due Magnitude of a Part, is either increaſed by too much *Nouriſhment*, or by fulneſs of *viſcid Humours* impacted, and the due natural Magnitude is abated by the defect of the *Nutriment*, or the obſtruction of the Veſſels by *viſcid Humours*; ſo that this *Species* of the *Diſeaſes* of the *Solid Parts*, depends on the different ſtate and motion of *Humours*, and that being altered, the *preternatural Magnitude* is Cured.

3. The natural *Cavities* of the Solid part or its Veſſels, are chiefly obſtructed by viſcid or coagulated *Humours*, and on them depends the Cure of *Obſtructions*, which alſo ſometimes depends on an *External Tumour* compreſſing the Veſſels, or the growing together of its Veſſels after an *Ulcer*.

4. The *Tone* of a Solid part is altered by the *Relaxation* of its *Nervous Fibers*, which happens through defect of the *Spirits*, or the obſtruction of the Veſſels by *viſcid Humours*; and, therefore this *Diſeaſed State* is cured by ſupplying the quantity, or altering the quality of the *Humours*. The curing of the vitiated

Tone of a part which depends on too much *Extenſion*, or *Humidity* of it, belongs to *Chirurgery*.

5. The *Continuity* of the *Solid Parts* is vitiated by the *Plethora* of *Humours*, which burſt the *Veſſels*; or the *Corroſive* quality, which eats them. The Cure of Wounds properly belongs to *Chirurgeons*.

6. The Natural and voluntary Motion of Parts depends on the Influx of *Spirits*, and other right diſpoſitions of the *Organs*, ſo that all *preternatural* alterations of Motion, whether increaſed, leſſened, depraved, or aboliſhed, depend on the different diſpoſition of Organs and Motions of the *Spirit*, and by rectifying them are Cured.

7. The Pain of the *Solid Parts* is the *corrugation*, or violent *agitation* of their *Fibers* when the *Spirits* are *irritated* by ſharp *Humours*, or the Motion of *Humours* obſtructed; from *Choler* is a hot Burning pain; a cool gnawing pain from *Acid Melancholy Humours*; a *Corroſive* pain, neither Hot nor Cold, from the *Salſo-Acid Serum*; a *Diſtending* pain from rarefied windy *Spirits*; a Heavy Pain from *Pituitous Humours*; a Beating pain from the *Pulſe* of the *Artery*; a *Tenſive* pain from the diſtention of the Parts by the fulneſs

fulneſs of *Humours*. Theſe Diſeaſes from Pain are onely Cured by evacuating the quantity, and altering the quality of the Humours. All other Pains depending on external Objects, relate to *Chirurgery*.

8. The Natural Figure of the *Solid Parts* may be altered, the Cure of which belongs to *Chirurgery*, when it does not depend on the fulneſs or vitious State of Humours.

9. The number of Parts exceeding or deficient, is properly ſupplied or abated by *Chirurgery*.

10. The undue Situation or connexion of Parts in *Fractures*, *Luxations*, *Hernia's*, or the *Prolapſus* of the *Anus* or *Uterus*, are to be rectified by *Chirurgical* means.

Theſe are the chief *preternatural* Indiſpoſitions of the *Solid Parts*, which hinder their Uſe and Actions; and they are called the Diſeaſes of the Solid Parts, or alterations from their Natural Conſtitution, State, or Qualities; and I have obſerved, how far each of them depends on the *preternatural* State of Humours as their Cauſe, that they may be more eaſily Cured by removing that, and that the Species of Diſeaſes might not unneceſſarily be multiplied, but reduced to the feweſt Heads.

CHAP. III.

Of the Preternatural State of the Humours, *or the Diſeaſes of the* Fluid Parts.

THE *Fluid Part* of an *Animal Body* is uſually called the *Humours*, with which not only the *Sanguineous*, or *Chyle*, or *Lymphatic Veſſels* do abound, but alſo all the *Nervous* and *Membranous Tubes* or *Fibrillæ*, which are filled with a Spirituous Liquor, which is the *Vehicle* of the *Animal Spirits*, and many other *Humours*, ſecreted by their peculiar *Glands* from the *Blood* or *Chyle*, are contained in their *Veſſels*, or rejected by *Nature* out of the *Body*. Although theſe Humours be of different kinds in an *Adult Animal*, yet whilſt the *Animalculum* begins to increaſe in the Egg, they all have their Production from the *white* of the Egg, colliquated by the heat of the *Hen*; and that Liquor which begins to circulate is *white* and *ſerous* at firſt, not unlike the *Albuminous Nutriment* by which it is Increaſed, but by the digeſtive heat of the

Hen,

Hen, and the long circulation, the ſeveral *Parts* of the *Sanguineous Maſs* are produced.

The *Fibrous Parts* of the *Blood* are produced from the *Viſcid Particles* of the *Albuminous Liquor*, which, upon boyling, are made *thick* and *white*, of which Colour the *Fibers* of the *Blood* appear when they are waſhed with *Water*.

The *Red Part* of the *Blood* is from the *Oyly* and *Acid Parts* long digeſted into a *Purple* Colour, and that tinges the whole *Maſs* of *Blood*.

The *Serum* or *watery Vehicle*, in which the other *Parts* ſwim, is only the *Albuminous Liquor* leſs digeſted.

The *Secretitious Humours* of *Animals* arrive not at their Perfection in an *Embryo*, till after a long Circulation, Digeſtion, and Volatilization of their *Principles*, for their *Spirits* are *poor* and *phlegmatic*, their *Choler* but a little *bitter*, nor their *Lympha* very *ſalt*, nor their *Blood* much *vitriolic*; for theſe *Qualities* are the Products of a ſtronger *Heat*, and a longer *Digeſtion*.

In an *Animal* brought forth, the *Chyle* is the firſt and original *Liquor*, from which the *Blood* receives its ſeveral *Parts*.

1. Its *Fibrous Parts* are from the *Caſeous Parts* of *Chyle*.

2. Its

2. Its *Oyly Red Part* from the *Butyrous Parts* of *Chyle*.

3. Its *Vitriolic Acid* from the *Acid Tartar* of *Chyle*.

4. Its *Serum* is the *Chyle* it ſelf in a middle ſtate betwixt *Chyle* and *Blood*, whoſe *wateriſh Particles* are the ſame as was in the *Chyle* it ſelf.

Theſe are the *Principles* of *Animal Humours*, out of which all the ſeveral kinds of them, according to their ſeveral degrees of Digeſtion or Mixture of thoſe *Principles*, are naturally conſtituted and diſtinguiſhed from one another.

Theſe following Humours are ſeparated from *Chyle* it ſelf, by the *Conglomerate Glands*, and therefore have the ſame Mixture of *Principles*, and a like Digeſtion as the *Chyle* it ſelf.

1. The *Spittle* and the *Pancreatic Juyce*, whoſe *Chylous Lympha's* agree in their *Uſe*, *Colour*, and *Glandules*.

2. The *Lympha* of the *Guts* and *Stomach*.

3. The *Mucus* of the *Wind-Pipe* and *Noſe*, and many other *Cavities*, as that of the *Joynts*, is of a more *Viſcid Conſiſtence*, uſeful for the defending the *Membranes* of thoſe Parts.

4. The *Spirituous Lympha* of the *Brain*, *Eyes*, and *Nerves*, ſerving for a *Vehicle* of the *Spirits*.

5. The *Milk* in the *Breaſts*.

6. The

6. The *Seminal Lympha's* in both Sexes.

7. The *Fat* of *Chyle* is produced from the *Buttery Parts.*

From the *Serum* of the *Blood*, is produced the *Salt Lympha.*

1. The *Lympha* of the *Lymphatics.*

2. The *Nutritious Juyce* in the *Amnion*, which is *Saltiſh*, and is deſigned for the Nouriſhment of the *Embryo.*

3. The *Salt Lympha* in the *Pericardium*, neceſſary for the Motion of the *Muſcles* of the *Heart.*

4. The *Salt Lympha* of the *Eyes.*

As the *Milky Lympha's* are deſigned chiefly for the producing of the *Chyle*, which is the firſt Digeſtion in an *Animal*; ſo the *Salt Lympha's* are deſigned for the turning of it into the *Serum* of the *Blood*, by its *Saltneſs*, which muſt be eſteemed the ſecond degree of Digeſtion in *Animal Humours.*

The third Digeſtion is when the *Serum* is fully ſanguified, and the *Secretitious Humours* prepared, which require the higheſt Digeſtion, as the *Spirits*, the *Semen*, the *Choler*, and the *Vitriolic Acid* of the *Blood.*

From the *Blood* it ſelf well digeſted are ſeparated theſe two *Humours.*

1. The *Choler*, which is precipitated from the *Blood* by the *Vitriolic Acid* of the *Spleen*, and was its *Oyly* and *Red* Part.

2. The

2. Its *Oyly Red Part* from the *Butyrous Parts* of *Chyle*.

3. Its *Vitriolic Acid* from the *Acid Tartar* of *Chyle*.

4. Its *Serum* is the *Chyle* it ſelf in a middle ſtate betwixt *Chyle* and *Blood*, whoſe *wateriſh Particles* are the ſame as was in the *Chyle* it ſelf.

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Theſe following Humours are ſeparated from *Chyle* it ſelf, by the *Conglomerate Glands*, and therefore have the ſame Mixture of *Principles*, and a like Digeſtion as the *Chyle* it ſelf.

1. The *Spittle* and the *Pancreatic Juyce*, whoſe *Chylous Lympha's* agree in their *Uſe*, *Colour*, and *Glandules*.

2. The *Lympha* of the *Guts* and *Stomach*.

3. The *Mucus* of the *Wind-Pipe* and *Noſe*, and many other *Cavities*, as that of the *Joynts*, is of a more *Viſcid Conſiſtence*, uſeful for the defending the *Membranes* of thoſe Parts.

4. The *Spirituous Lympha* of the *Brain*, *Eyes*, and *Nerves*, ſerving for a *Vehicle* of the *Spirits*.

5. The *Milk* in the *Breaſts*.

6. The

6. The *Seminal Lympha's* in both Sexes.

7. The *Fat* of *Chyle* is produced from the *Buttery Parts.*

From the *Serum* of the *Blood*, is produced the *Salt Lympha.*

1. The *Lympha* of the *Lymphatics.*

2. The *Nutritious Juyce* in the *Amnion*, which is *Saltiſh*, and is deſigned for the Nouriſhment of the *Embryo.*

3. The *Salt Lympha* in the *Pericardium*, neceſſary for the Motion of the *Muſcles* of the *Heart.*

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The third Digeſtion is when the *Serum* is fully ſanguified, and the *Secretitious Humours* prepared, which require the higheſt Digeſtion, as the *Spirits*, the *Semen*, the *Choler*, and the *Vitriolic Acid* of the *Blood.*

From the *Blood* it ſelf well digeſted are ſeparated theſe two *Humours.*

1. The *Choler*, which is precipitated from the *Blood* by the *Vitriolic Acid* of the *Spleen*, and was its *Oyly* and *Red* Part.

2. The

2. The *Sub-acid* and *Slimy Humour* of the *Spleen*, which is ſeparated by the *Spleen* from the *Viſcid* and *Vitriolic Particles* of the *Blood*; and this chiefly ſerves the Separation of the *Choler* from the *Blood*; but the *Choler* is deſigned for the correcting the *Crudities* of the *Chyle*; and by this means the *Liver* ſanguifies, and helps *Chylification*.

I have given this large Catalogue of the *Animal Humours*, that the original *Liquors*, from whence each *Secretitious Humour* is prepared, may be obſerved, upon whoſe healthful Conſtitution the perfect natural Temper of each *Secreted Humour* depends.

It would cauſe endleſs Repetitions to treat of the preternatural State of each *Secreted Humour*, for they have the ſame as their original *Liquors*, which are the *Chyle*, the *Serum*, and the *Blood* it ſelf.

1. The *Chyle* muſt be well prepared by Fermentation from proper Food, and acquire that degree of Fermentation which is natural to each *Animal*.

2. The *Chyle* ought to be well changed, and digeſted into *Serum*.

3. The *Serum* muſt be truly ſanguified by a long Digeſtion.

4. The Quantity of *Humours* ought to be proportionable to their *Veſſels*, and to be contained in them.

5. *Humours*

5. *Humours* ought to have their natural Circulations, as the *Blood*, the *Lympha*, and *Spirits*; and the *Secretitious Humours*, their full Secretion; and those that be unuseful, their expulsion out of the *Body*; and those that be useful, their return into the *Blood*, as their common Ocean; or to be preserved in their several *Vessels*.

These are the natural States of the *Humours*, which are necessary for the healthful Constitution of *Animals*, and the contrary to those many Alterations from them in an unhealthful or a diseased State; of which, I shall make the following Scheme.

First, If the *Animal Humours* are ill prepared or digested, or fermented to any degree below their natural State, some of the cold *Cacochymia's* are produced; of which, I shall reckon these several degrees.

1. A *Mucilaginous* State of the *Chyle*, or other *Humours*, and this is what is commonly called the *Pituitous Cacochymia*.

2. The *Tartareous* or *Acerb* State of *Chyle*, or other *Humours*, and they appear in Bodies subject to *Sowreness*, and is a higher degree of Digestion than the *Pituitous* State, but both stand below the natural Digestion or Fermentation of the Meat.

3. A *Flatulent* Temper or State of the *Chyle*, or other *Humours*, when the *Spirits* of the *Chyle* are begun to ſeparate, and have half fermented the *Chylaceous Maſs*, and then it has the State of *New Drink* not fully ripened by Fermentation.

4. A *Seroſity* of *Blood* is the natural conſequent of a *Mucilaginous*, *Tartareous*, or *Flatulent Chyle*.

Secondly, If the *Chyle* be over-fermented or digeſted too much, it becomes *Bitter*, *Acrid*, *Rancid*, or *Putrid*, for we often perceive the *Meat* in the *Stomach* either *Burning*, or *Bitter*, or *Oyly*, or *Stinking*; and from this State of *Chyle* are produced theſe ſeveral degrees of the hot *Cacochymia* in the *Blood*, and other *Humours*.

1. A *Bilious*, *Bitter*, *Acrid* State of *Humours*; and this is known by the Bitterneſs in the Stomach, and the Abhorrence of bitter things, and the continual Heat in the Habit of the Body, as well as the Paſſions of the Mind, as Anger, Revenge, Courage.

2. A *Viſcid* State of *Blood*, which produces *Pains* and *Inflammations*, and is evident upon *Bleeding*, when there is a defect in the *Serum*, or a *Viſcid* Conſiſtence of the *Chyle*, upon the top of the *Blood*, which is called its *Sizineſs*.

3. The

3. The *Vitriolic* Acidity of the *Blood*, which appears by any black *Humour* evacuated, and by the Affections of Fear and Sadneſs.

4. The *Serum* of the *Blood* acquires a *Salt Acrimony*, which corrodes and eats the *Gums*, infects the *Skin* with Spots, and is the *Hot Scurvey*.

5. The Putrefaction of any *Humour* is the higheſt reſolution or diſſolution of its *Principles*, from that State and Mixture which made it the *Humour* of a particular *Animal*; of which, theſe ſeveral Species are very evident;

1. *Diſeaſes* depending on an inward Ferment, altered by the ill uſe of the Six *Non-Naturals*, as *Fevers* intermitting, with the ſeveral *Symptoms* attending them.
2. Thoſe *Diſeaſes* which depend wholly on an outward Ferment received into,
   1. The *Fleſh*; as *Hydrophobia*, by the Bite of a *Mad-Dog*; or the Poyſon of any *Venomous Animal*, by its Bite or Sting.
   2. The *Serum*, by the Infection of the touch of a *Salt Humour*, to which the *Morphews*, *Scab*, *Pox*, and *Scald-Head*, are referrable, and

and *Leprosie*; all which are in some measure Infectious, by a *Corrosive Humour*.

3. All *Venomous Medicines* which corrode and ferment the *Humours*, become Poysonous to the *Animal*.

4. All *Malignant Fevers*, as the *Small-Pox*, *Measles*, and *Plague*, or *Pestilential Fevers*, have their original from the *Malignity* of the *Air*, and the *Poysonous Sulphurs* of the *Earth*.

5. *Worms* and *Lice* are either produced by an *Egg* received into the *Animal*, or the *Putrefaction* of its *Humours*.

Thirdly, If the *Chyle* be very plentiful, it breeds the following Diseases.

1. An over-abundance of *Milk* in the *Breasts* of Women.

2. A *Satyriasis*, or an abundance of *Seminal Lympha's*.

3. A *Fatness*, or over-growing of the habit of the *Muscular Flesh*, or the great quantity of *Fat*, both which is called an *Obesity*, or too *Fat*, with an abundance of the *Chylous Lympha's*.

4. An undue increase of the *Viscera*, or other Parts, whilst the others decay, as in the

the *Rickets*, and the *Impoſthumations* of the *Viſcera*, eſpecially the *Liver*. The *Rickets* are a Species of the *Palſie*.

5. A *Plethora* of *Blood*.

Fourthly, If the *Chyle*, or other *Nutritious Humours*, be wanting or deficient, theſe ſeveral kinds of Defects are produced.

1. A Defect of *Milk* in the *Breaſts*.
2. A Defect of the *Semen* in *Sterility*.
3. An *Atrophy* of the *Body*, or any part of it, or the *Viſcera*.
4. A Defect of the *Saliva* in Thirſt.

The following Diſeaſes depend on the vitiated Motion of Humours.

All Obſtructions depend on the ſtoppage of the Motion of the *Animal Humours* through their *Veſſels*.

I. The Obſtruction of the *Chyle-Veſſels*, which produces the *Tumours* of the *Meſentery*, and its *Glands*.

II. The Obſtruction of the *Blood-Veſſels*.

1. As in the *Polypus*, and ſuffocating *Catarrhs*.
2. The Reflux of *Blood* is ſtopt in *Inflammations* and *Tumours*, *Varices*, and *Hæmorrhoids*.

III. The Secretion of *Humours* through their ſeveral *Glands* is hindred.

1. In the *Jaundice* the *Choler* is hindred from its Secretion.
2. In the Diſeaſes of the *Spleen* the Separation of the *Vitriolic Slimy Humour* is ſtopt, and that evacuated into the *Stomach.*
3. The Secretion of the *Salt lympha* is hindred in the *Scrophula*, and in *Catarrhs*; or elſe of the *Milky lympha's* in the cooler kind, and in the *Tumours* of the *Breaſts.*
4. The Secretion of *Animal Spirits* is hindred through the *Glands* of the *Brain*:
   In *Apoplexies*, *Lethargies*, or any other ſleepy Diſtempers.

Fifthly, The Motion of the *Animal Humours*, which are excrementitious, are ſuppreſſed in the following Diſeaſes.

1. In an *Iſchuria*, which is a Stoppage of *Urine.*
2. In a want of *Stools*, or *Aſtrictio Alvi.*
3. In the ſtoppage of *Tranſpiration* or *Sweat.*
4. In a Suppreſſion of the *Menſes.*
5. In a Suppreſſion of the *Lochia.*
6. In the long retaining of a *Mola.*
7. In the Suppreſſion of the *Hæmorrhoids.*

Sixthly, The preternatural Evacuation of *Nutritious Humours* out of the Body, are,

1. By

1. By a continual *Vomiting.*
2. By a *Diarrhæa* or *Looſeneſs.*
3. By a *Diabetes.*
4. By a *Ptyaliſmus.*
5. By a *Gonorrhæa.*
6. By the *Fluor Albus.*
7. By too much *Sweating.*
8. By an *Abortion.*
9. By an *Epiphora* or *Flux* of Tears.
10. Incontinence of *Urin.*

Theſe are the *Fluxes* which cauſe *Diſeaſes.*

Seventhly, The Evacuations of *Blood*, are,

1. The *Bleeding* at *Noſe.*
2. *Spitting* of *Blood* from the *Throat* or *Lungs.*
3. The great *Flux* of the *Hæmorrhoids.*
4. The *Flux* of *Blood*, like the waſhing of Meat, in *Fluxu Hepatico.*
5. Too great a *Flux* of the *Menſes.*
6. The *Piſſing* of *Blood.*
7. The *Vomiting* of *Blood.*

Eighthly, The preternatural Evacuation of *Serous Humours* into the *Cavities* of the *Body*, are,

1. In an *Aſcites*, when the Water fills the *Cavities* of the *Belly.*
2. In the *Dropſie* of the *Breaſt*, or *Head*, or *Teſticles*, it fills thoſe particular *Cavities.*

3. In an *Anaſarca* it fills the *Muſcular Habit* of the Body.

Theſe *Diſeaſes* depend on the vitiated Motion of *Animal Spirits*, and their preternatural Qualities.

Firſt, The Motion of the *Animal Spirits* is ſtopt in the *Nerves* by the Viſcidity of their *Succus Nervoſus*.

1. In thoſe belonging to half the *Body*, or the whole, in *Palſies*.

2. In thoſe belonging to the *Heart*, or *Pulſe*, in *Fainting*, or *Syncope's*.

3. In the *Nerves* of the *Eyes*, in a *Gutta Serena*.

4. In thoſe of the *Ears*, in a *Deafneſs*.

5. In thoſe of the *Tongue* and *Noſe*, in the loſs of their *Smell* and *Taſte*.

6. In thoſe of the *Stomach*, in the want of *Appetite*.

7. In the *Nerves* of the *Generating Organs*, in *Venere languida*.

8. In thoſe of the *Oeſophagus*, *in deglutitione impeditâ*.

Secondly, The Motion of the *Animal Spirits* into the *Senſes* is continued longer than uſual, and this *Expanſion* is called *Vigiliæ*, or want of *Sleep*, and depends on a hot *Flatulency*, or *Elaſticity* of *Spirits*.

Thirdly,

Thirdly, The *Animal Spirits* are ſometimes irritated, and violently agitated in particular Parts by ſome ungrateful Object: and this is called *Pain*:

Whoſe Species are,

1. *Cephalalgia*, or *Pain* of the *Head*.
2. *Cardialgia*, or *Pain* at the *Stomach*.
3. *Colica*, or *Pain* in the *Stomach* or *Guts*.
4. *Odontalgia*, or *Pain* in the *Teeth*.
5. *Otalgia*, or *Pain* in the *Ear*.
6. *Stranguria*, or *Pain* in the making of *Urin*, from *ſharp Humours*.
7. *Calculus*, or *Pain* in the *Urin Paſſages*, from the *Stone*.
8. *Podagra*, or *Pain* in the *Joynts*.
9. *Arthritis Scorbutica*.
10. All the *Inflammations* and *Ulcers* following them cauſe great *Pain*:

Whoſe Species are,

1. *Aphthæ*, or *Inflammations* of the *Mouth*.
2. *Angina*, or *Inflammations* of the *Throat*.
3. *Inflammations* of the *Uvula*, and *Tonſils*, and *Gums*.
4. *Parotis*, or *Inflammations* of the *Glands* about the *Ears*.
5. The *Inflammation* of the *Stomach* or *Inteſtines*.
6. The *Inflammation* of the *Anus*, and *Hæmorrhoids*.

7. The *Inflammation* of the *Liver* or *Spleen*.
8. *Nephritis*, or the *Inflammation* of the *Kidnies*.
9. *Phrenitis*, or the *Inflammation* of the *Membranes* of the *Brain*.
10. *Ophthalmia*, or the *Inflammation* of the *Eyes*.
11. *Peripneumonia*, the *Inflammation* of the *Lungs*.
12. *Pleuritis*, the *Inflammation* of the *Pleura* and *Muſcles* of the *Breaſt*.
13. *Inflammations* of the *Breaſts*.
14. *Rheumatiſmus*, or the *Inflammations* of the *Muſcles* of the *Limbs* in general, or elſe of ſome particular *Muſcles*, as thoſe of the *Hip*, in the *Iſchias*; or the *Back*, in *Lumbago*.
15. *Inflammation* of the *Stones*.

By the continuance of the *Inflammations*, *Impoſthumes* and *Ulcers* are bred in all the Parts of the *Body*, the chief of which, are,

1. *Vomica*, or an *Abceſs* in the *Lungs* contained in a *Bladder*.
2. *Empyema*, or a collection of *Matter* in the *Cavity* of the *Breaſt*.
3. *Phthiſis*, or an *Ulcer* in the *Lungs*.
4. *Dyſenteria*, or an *Ulcer* in the *Inteſtines*.
5. *Teneſmus*, or an *Ulcer* in the *Inteſtinum rectum*.

6. *Ulcers*

6. *Ulcers* of the *Eyes.*
7. *Ulcers* of the *Kidneys* and *Bladder.*
8. *Ulcers* of the *Anus.*
9. *Ulcers* of the *Viſcera*, as *Liver*, *Spleen.*
10. *Ulcers* of the *Glands* in the *Scrophula* or *Kings-Evil.*
11. *Ulcers* of the *Mouth* and *Throat*, *Noſe* or *Ears*, *Gums* and *Stomach.*
12. *Gonorrhœa*, or *Ulcers* of the *Proſtatæ.*

All theſe *Ulcers* may conveniently be treated of immediately after the *Inflammations* of their ſeveral parts, to which each *Ulcer* muſt be referred.

Becauſe the *Fever* attending *Inflammations* for the moſt part, though at firſt it occaſions them, yet afterwards it depends on the *Tumour* and *Pain*; I choſe to referr them to the Claſs of *Pains*, rather than to that of *Fevers*; and alſo, becauſe many *Inflammations* depend on other cauſes than *Fevers*; but all are attended with great Pain.

Fourthly, The *Animal Spirits* are ſome time in an exploſive Motion, by which they cauſe *Convulſions*, which depend much on the hotteſt Flatulency of *Humours*; as,

1. *Epilepſia* is a *Convulſion* of all the outward Parts, with a falling down ſuddenly.

2. *Paſſio Hyſterica* is a *Convulſion* of the inward Parts, as the *Lungs*, *Diaphragma*, *Meſentery*, *Womb*, and *Muſcles* of the *Belly*.

3. *Chorea Sti Viti*, is a Species of *Convulſion* obſerved in the *Lameneſs* of Girls, before their Puberty, with ſhaking of their Leg and Hand.

4. The *Convulſions* of Children from Pain, as in the breeding of *Teeth*, *Gripes*, or *Worms*.

5. The *Convulſion* from *Serous Matter* in the *Heads* of Children, or the *Metaſteſis* of a *Malignant Fever* thither.

6. The *Palpitation* of the *Heart* is a *Convulſion* of it.

7. *Singultus* is a *Convulſion* of the *Stomach* and *Diaphragma*.

8. *Coughing* is a *Convulſive Motion* of the *Breaſt*.

9. *Sneezing* is a ſlight *Convulſion* from *Humours* irritating the *Noſe*.

10. *Priapiſmus* is a *Convulſion* of the *Penis*, which cauſes *Painful Erection* of it.

Fifthly, The *Animal Spirits* have ſometimes a violent, tumultuous, or reſtleſs Motion in the *Brain*, by which the Judgment is depraved, and the *Idæa's* confuſed.

1. *Mania* is a furious Motion of the *Animal Spirits*, with the Paſſion of Anger and Boldneſs; theſe *Spirits* are from a *Rancid*, *Cholerick Blood*.

2. *Melan-*

2. *Melancholia* is a reſtleſs Motion of the *Spirits*, joyned with the Paſſion of Fear and Sadneſs; from a *Vitriolic* State of *Blood*.

3. *Furor uterinus* is a *Delirium* joyned with an immoderate Appetite of *Venery*, in which caſe the *Spirits*, as well as the other *Humours*, are tinctured with the *Seminal Fætid Lympha*.

Sixthly, The *Animal Spirits* acquire ſome crude or mixt Flatuoſity; or become windy, as in bottled *Liquors*, or the *Spirits* of thoſe not fully fermented. Theſe *Diſtempers* happen in a flatulent *Cacochymia*.

1. *Vertigo*, which is a vertiginous Motion of *Spirits*.

2. *Tympanites* is a permanent Inflation of the *Membranes* of the *Abdomen*, by flatulent *Spirits*.

3. *Aſthma* is the Inflation of the *Membranes* of the *Lungs*, and of the *Membranes* covering the *Muſcles* of the *Thorax*, but does not continue long.

4. *Incubus* is an Inflation of the *Membranes* of the *Stomach*, which hinders the Motion of the *Diaphragma*, and *Lungs*, and *Pulſe*, and *Motion*, but with a ſenſe of a weight oppreſſing the *Breaſt*.

5. A windy Inflation of the *Uterus*, after Child-Bed, in many *Hyſterical* Women, and

thoſe eſpecially who have oft Miſcarried, are ſenſible of Wind paſſing from the *Womb*.

6. The flatulent *Tumours* of particular Parts.

Seventhly, The *Animal Spirits* are unfit for the Motions of Senſe or Reaſoning, or Memory, by their depauperated or wateriſh State, or ſome Indiſpoſition in the Canals of the *Nervous Fibers* in all Fools, which we call *Moroſis*, and the *low*, *phlegmatic*, or *wateriſh*, or *tartareous Cacochymia's*. Each *Cacochymia* produces *Animal Spirits* of a peculiar Temper ſuitable to it; ſo that by obſerving the *Cacochymia*, we may know the particular ill State of the *Spirits*; and this cannot be cured without altering the other. The *Spirits* are a *Secreted Humour*, and often circulating through the *Blood*; they muſt partake of its ſeveral *Cacochymia's*; and this Obſervation is moſt certain; *qualis chylus, talis eſt ſanguis; qualis ſanguis, talis eſt ſuccus nervoſus, cæteriq; omnes humores ſecretiti.*

CHAP.

CHAP. III.

Of the Preparation of Animal Humours *by Fermentation.*

FRom the *Crude* and *Watry Juices* of *Vegetables*, we prepare all our *Wines* by *Fermentation*, which diſſolves the *Slimy Mucilage* of the *Grapes*, or other *Fruit*, into a more *fluid Conſiſtence*; it ſeparates the *Acid Particles* from the more *Earthy*, and *volatilizes* the *oleous Particles*, and unites them with the *Acid*; for we obſerve that all *fermented liquors* (whether from *Fruits* or *Corn*,) are compoſed out of a ſweet rarefied and well digeſted *Mucilage*, and of *Acid Oleous Particles*, (which are their *pungent Spirits*,) all which being diſſolved in a *Watry Vehicle*, the *fermented liquors* obtain a clear, lympid, and equal *Conſiſtence*.

The Particles which compoſe our *Chyle*, are very like thoſe mentioned of *fermented liquors*, and by the following Diſcourſe it will be manifeſt, that the *Chyle* has its preparation by being *fermented* as other Liquors be.

Chyle

Chyle has the ſame Principles as *Milk*, a *viſcidity* from the *Caſeous Parts*, an oylineſs from the *Butyraceous Parts*, and an *Acidity* from the *Tartareous*, which we taſte in *Butter-milk*; beſides, a *wateriſh Seroſity*, in which the other Principles ſwim and are mixed.

It is ſcarce doubted by any of our *Modern Phyſicians*, that the *Chyle* is prepared by *Fermentation*, when they conſider the nature of the *Saliva*, how much it ferments *Animal Humours* when any one is Bitten by a *Mad Dog* or other *Venomous Creature*; and the moſt familiar uſe of the *Runnet* is to ferment our *Milk*, and give a ſtrong *fœtor* to *Cheeſe*. Beſides the *Saliva*, there is obſerved in the *Stomach* of *Animals*, a *ſlimy lympha* iſſuing from the *Glandules* of the *Cavities* there, which being *Slimy*, *Fœtid*, *ſub-Acid*, or *ſalſo-Acid*, it reſembles the natural temper of the *Runnet*, and likewiſe its uſe, by being an *Animal Ferment*.

In *Birds* there are no Reliques of the former Digeſtion in their *Craws*, or *Gizards*, and therefore the *lympha* of the *Primæ Viæ*, ſuffices for a *Ferment* without the *Acid* Reliques, and the ſame ſuffices in the firſt digeſtion of the *Succus Nutritius* in an *Embryo*.

That I may the better explain the *Fermentative Nature* of the *Saliva*, and the other *lympha's* of the Stomach, I will compare it with *Barm*, which, 1. Is

1. Is ſeparated from a fermenting Liquor; and contains the Spirits of it in Bubbles; ſo the *Saliva* is ſeparated from the *Chyle* new mixt with the *Serum* of the *Blood*, and from thence it has its preternatural *Acid*, *Bitter*, or *Salt* Taſte.

2. *Barm* has *viſcid Parts*, it ſmells ſtrong, and gives a heat on the Tongue. I have Diſtilled a *vinous* Spirit from it, ſo that it contains Spirits fit to *ferment*. The *Saliva* is *viſcid*, and gives a Milky cruſt, when dryed, on the Tongue; it is naturally frothy, and it much weakens the digeſtion to Spit much; it has no conſiderable Smell or Taſte, becauſe it ought to take *ſapid* Particles from other Bodies in moſt *Animals*, but Birds who ſwallow whole Grains can have no Taſte. Wheat Meal, with the white of an Egg, ferments in the want of *Barm*, and the white of an Egg is a *glandulous Milky lympha*.

3. The Spirits included in *Barm*, agitate the Spirits of new Drink, ſo the *Saliva* contains an oyly *Acid* in it, which gives it a whiteneſs like *Chyle*, and theſe *active Particles* give a *fermentative Motion* to thoſe included in the new Meats.

This *fœtor* in the *lympha* of the Stomach, is from the Spirits of the *Animal*, (for it reſembles the Smell of each *Animal*, and no *fœtor* is produced without a high *fermentation*.)

This

This therefore eaſily communicates its Internal agitation, (when the Food comes chewed and broken into the Stomach) to the oyly *Acid Particles* of the *Alimentary Maſs*, whoſe *viſcid Particles* are rarefied by the mentioned agitation, and the oyly *Acid* diſſolved in the liquid part, and hence is the *Colour* and *Conſiſtence* given to *Chyle*.

That the Meat in the Stomach is diſſolved by *fermentation*, appears by the following obſervations.

The Contents in the Stomach, after their diſſolution, ſtrike the Noſe with a pungent *Acidity*, from the volatilization of the *Tartar* of the *Chyle*.

There is alſo in the Contents in the Stomach a *flatulency*, and a great *fœtor*, which are the natural effects of *fermentations* in *Vegetables*, and of *putrefaction* in *Animals*, which is the higheſt degree of *fermentation*.

We know not yet any *Menſtruum* which can ſo ſuddenly diſſolve Fleſh Meats, but we find that they ſoon Putrefie, and thoſe that be half Putrefied, are eaſieſt digeſted.

As to our Drink, that is wholly prepared by Fermentation; and we find, by our Experience, that all fermented Meats and Drinks are eaſilieſt digeſted; and thoſe unfermented, by *Barm* or *Leaven*, are very hardly digeſted.

But

But the *fermentation* of our *Chyle* will appear more evidently, by obſerving, that whatſoever Medicine helps the *fermentation* of Wines, thoſe of the ſame nature promote alſo the preparation of our *Chyle*, which is by raiſing its fermentation.

1. *Calx viva* and *Gypſum* put into fermenting Wines, help their Fermentation, by precipitating their *Crude Tartar* which fixes the oyly Spirits, and coagulates them. After the ſame manner Phyſicians, by their fixed and *volatile Salt*, and *teſtaceous Medicines*, exalt the *fermentation* of the *Blood*, and free the oyls from the auſtere *Tartar*, with which the Medicines mentioned are coagulated, and paſs off by *Stool* or *Urine*, and the ſame Medicines help the digeſtion in the Stomach.

2. *Aromatics*, as *Cubebs*, *Cinnamon*, *Nutmegs*, *Orris*, or *Cloves*, are uſually put into crude poor Wines, to give them more oyly Spirits, and to excite their languid Motion; and for the ſame end crude Wines are included in reſinous Veſſels; and we add *Reſin*, or ſhavings of *Fir* to vapid Wines. Theſe are eaſily turned into a flame by Fire, and theſe therefore more readily produce heat and ebullition in *fermenting Wines*, which is only a leſs degree of Fire, from a leſs intenſe Motion of its oyly *Acid Particles*.

Phyſicians

Phyſicians for the ſame end uſe all ſorts of *Aromaticks*, and *Reſinous Plants*, that by their *volatile Oyls*, they might agitate and rarefie the *Oyly Particles*, both in the *Chyle* and *Blood*, and by that means raiſe their *fermentations*.

3. *Bitter Acrid Plants* help the *fermentation* and *depuration* of all *Mault liquors*, and therefore *Muſtard* and *Ginger* are ſometimes added to *Beer* or *Cyder*, to promote their *fermentation*; and *Hops* or *Worm-wood* have the ſame effect.

Our *Blood* and *Humours* are much heated by *Bitter* and *Acrid* Medicines; they excite our *Appetite*, and haſten the digeſtion of our *Food*, as every ones experience does evince.

4. The *Greeks* uſe *Sulphur* in the preparation of *Crude Wines*, and in many Places, the Veſſels are ſulphurated with *Brimſtone*; by experience we are taught, that *Metallic Sulphurs* exagitate the Oyls of *Animals*, and thereby promote their *Chylification* and *Sanguification*.

5. *Vinous* Liquors abound with an *Oleous Acid Spirit*, whereby they much promote the *fermentation* of other Liquors, and for this reaſon *vapid Wines* are put upon the Lees of more noble Wines to give them a Spirit, and for the ſame reaſon we *Stum* our *crude Wines* to new ferment them, and to renew their *Spirits*.

In the crudities of the *Chyle*, all *Animal ferments* are uſeful, as old *Cheeſe*, in which the *Runnet* lies: *Vinous* Liquors which have undergone a *fermentation*, are apt to produce the ſame in other Liquors; ſo Spirituous Liquors cauſe the *Chyle* and *Blood* to *boil* and *ferment*, and ſometimes produce a *Fever*.

We uſe the inward skins of Gizards of *Hens* and *Pidgeons*, in which the *Animal ferment* lies, to help our digeſtions; we invent new *Sauces* and *Pickles*, which reſemble the *Animal ferment* in Taſte and Virtue, as the *Salſo-Acid* Gravies of *Meat*; the Salt Pickles of *Fiſh*, *Anchoves*, *Oyſters*; Pickled Fruits, as *Mangoes*, *Olives*, *Capers*, *Chatchops*, and an *Indian liquor*; all which promote the *fermentation* of our *Meats*, and ſo produce a *Surfeit*; ſometimes *French Wines* and *Rheniſh* heat the *Blood* and ferment the *Chyle*.

The ſame Medicines not only ferment both the *Chyle* and *Wine*, but alſo the *fermentation* is reſtrained and ſtopped by the ſame alike.

The heat of the Fire promotes *fermentation*, and much Cold checks it; ſo we apply heating Medicines or Skins outwardly to a weak Stomach, and we find all Cooling things inwardly and outwardly to cauſe pain and gripes in weak digeſtions.

Acids, *Fats*, auſtere *Juices*, and thoſe that are very *Mucilaginous* and *Watry*, are difficult-

ly *fermented* by Art, but hinder both the *fermentation* of *Wines* and the *Chylaceous Maſs*, for theſe Taſtes hinder the agitation of the *Oleous Acid Particles*, becauſe they conſiſt of Particles difficultly moved.

This *fermentation* by which the *Chyle* and *Blood* are prepared, may be depraved both ways, for it may be depreſſed under its natural State, or exalted above that degree which is ſuitable to the natural temper of any *Animal*, of both which Errors, and the *Cachochymia's* depending on them, I ſhall next diſcourſe.

But I ſhall firſt farther obſerve, that though the *Chyle* is prepared by *fermentation*, yet all other humours ariſing from it, as the *Serum* and *Blood*, and all the *ſecretitious humours* from each of them, are prepared only by circulation and a longer digeſtion, by mixture and *ſecretion*; for by theſe they may acquire their peculiar *Craſes* and *Taſtes*; by the *ferment* of the *Stomach*, the various kinds of *Meats* are changed into the natural temper of each *Animal*, and the *lympha* of the Stomach has moſt eminently the *Specific Taſte* of each *Animal*, as will appear to any perſon who will taſte it.

If the *Chyle* be rightly *fermented*, all the humours ariſing from it are duly prepared; but if the *fermentation* of that is vitiated, all the

the other humours produced from vitiated *Chyle*, retain a Tincture of its defect in their preparation.

Whatſoever *ferments* the Meat, helps and raiſes the digeſtion of all other humours, and therefore we need not enquire for any *ferment* or other *digeſtives*, for the particular humours of *Animals*, beſides thoſe which ferment the *Chylaceous Maſs*.

All the conditions requiſite to a *fermentation*, are to be found only in the *Stomach*, and its *fermentation* very clearly explained, by comparing the digeſtion of the *Stomach* with Artificial *fermentations* of *Vegetables*; for we firſt pound the Plant which is to be *fermented*, and dilute it with Water in which ſome *ferment* is diſſolved, and afterwards it is to be placed in ſome warm place till it acquires a *Vinous acid ſmell*, and then it is fit for the yielding a brisk inflammable Spirit.

After the ſame manner our Meat is chewed and ſwallowed into the *Stomach*, and there mixed with the *Saliva*, and the *viſcid ſlime* of the *Stomach*, which are its *ferments*.

The *Stomach* has a gentle digeſting heat from the neighbouring *viſcera*, which are *Sanguineous*, whoſe warmth digeſts the Meat into a *pulp*, which ſmells *ſub-acid* and *fœtid*, and that *ſtimulating*, the *Stomach* excites its *expulſion*; for if it ſhould ſtay longer there,

it would become *putrid*; but no more is requiſite, but the looſening the natural Texture of our *Aliments*, and making the oyly *acid* parts and the *viſcid* free to diſſolve into an *Alimentary Tincture*, which is only the juyces of *Vegetables* and *Animals* diſſolved out of their *fibrous Veſſels*, and then they will as eaſily *ferment* as they did in the *Plant* or *Animal* in which they were firſt produced. The capacity of the *Stomach* makes it fit for a *fermenting Veſſel*, and its *Membranous* ſubſtance makes it fit for the *diſtention* neceſſary upon a *fermentation*, and its two *Orifices* are prepared for the letting forth of the rarefied Spirits in *ructus* or *windineſs*, the common effects of all *fermented liquors*.

CHAP.

CHAP. IV.

Of the Depreſſed Fermentation of Humours *in General.*

WHen a *ſlimy*, *acerb*, or *flatulent Chyle* is produced, and when from thence a watery *ſerous Blood* is digeſted, we muſt acknowledge that both the *Chyle* and *Blood* have had too weak a *fermentation*, and by that are ill prepared; of which defect we uſually obſerve theſe Cauſes.

Firſt, When the Meats we uſe have ſome vitious Quality, which gives the ſame Tincture to the *Chyle*, and that is not corrected by the Digeſtion, as in Meats hardly *fermented*, as thoſe which have a tough conſiſtence: All Meats of a *Watry*, *Mucilaginous*, *Acerb*, *Viſcous*, *Oleous*, *Acid*, *Auſtere*, and *Fat Taſte*, and ſuch as the Meat is in any eminent quality, ſuch is the *Chyle*, and the ſtate of *Humours* thence ariſing, for we obſerve a *Mucilage* in crude Corn; and thoſe *Green-ſickneſs* Girls, who eat great quantities of *Oat-Meal*, abound with an extraordinary quantity of crude

Mucilaginous Chyle which oppreſſes their *Stomachs*, and ſtuffs their *Lungs*, and gives a great *Paleneſs* to the whole habit of the body.

Not only the quality of our *Diet* depreſſes the *fermentation* in the *Stomach*, but the quantity may be more than the *ferment* can concoct or ſuffice to diſſolve and agitate; ſo by frequent Debauches, the Digeſtion is weakned, and after too great a fulneſs the *Stomach* is oppreſſed, and flatuoſities produced in it.

Secondly, The *Preternatural* ſtate of the *ferment* which ought to be ſeparated from the *Chyle*, well circulated and exalted in the *Blood*, by the *Glands* of the *primæ viæ*, and to have the *fætid Animal Spirits* mixed with a *Chylous Mucilage*, and *Tartareous acid*, whilſt it retains, its healthful *Conſtitution*, but it is altered from this ſtate in a depreſſed *fermentation*.

1. When the *ferment* of the *Stomach* is *vapid*, or leſs *impregnate* with the *fætid Animal Spirits*, when its *conſiſtence* is too *viſcid* or *phlegmatick*, or its *acidity* too *acerb* or *crude* and leſs *volatile*.

2. The *Bile* if it be *inſipid*, *watery*, *viſcous*, depreſſes the *fermentation* of the *Chylaceous Maſs*, for by its *bitterneſs* and *acrimony*, it ought to correct the *acidities* of it, which are produced by the *fermentation* in the *Stomach*, and by the ſame Taſtes, like *bitter*

Plants

Plants in other Liquors help their *depuration*, and *fermentation*, and with the *Acid* unite into an *Animal volatile Salt*.

3. Theſe ill qualities of the *Ferment* and the *Bile* depend on a *crude*, *watery*, *auſtere*, *mucilaginous Blood*, derived from *Parents*, or otherways produced; for the *ferment* will retain the *crude* ſtate and temper of the Humours, from which it is derived.

4. A remiſs *Circulation* of the *Blood* ill digeſts, and worſe ſeparates the *ferment* from it.

5. *Wateriſh Humours*, which ought to have been ſeparated by other *Glands*, being detained in the *Blood*, they deprave and enervate the *ferment*, which are alſo tranſmitted to the *Stomach* with it; ſo by the ſuppreſſion of the *Menſes*, or other Evacuations, and eſpecially by *Fevers*, and a *Catarrh*, the *Stomachical ferment* is *vitiated*.

6. Great Evacuations which carry off the *nutritious Humours*, weaken the *ferment*, as *Hæmorrhagies*, which *depauperate* the *Blood* by *Vomitings* and *Looſneſs*, which carry off the *fermenting* Maſs, *Convulſive* diſtempers, and all *Nervous* effects, which ſpend the *Animal Spirits*, or divert them from the *Stomach*.

7. Some of the ſix *Non-Naturals* alter the *ferment*, as our Diet, which is mentioned

above, and Idleneſs, or want of Motion, hinders the ſecretion of the *ferment*, and diſtribution of the *Chyle*, from which it is prepared.

Sleep cauſes the ſame Stagnation of *Humours*, if immoderate.

Fear ſtops the Circulation of *Blood*, and Secretion of the *Humours*.

Too much heat in the Summer time cauſes the *Blood* and *Humours* to evaporate their *volatile* parts, which promote the Fermentation.

In a cold and moiſt Region the *Ferment* is too *ſlimy* and *wateriſh*.

Thirdly, Digeſtion is vitiated by the Diſeaſes of the *Stomach*; when it wants its Rugoſity, the Meat deſcends undigeſted too ſoon, or is vomited up; when it is ſtopt by any *Tumour*, *Contraction* or *Compreſſion* about the *Pylorus*, the Meat turns ſowre and flatulent.

The Cure of a *weak Digeſtion* conſiſts,

I. In avoiding all theſe evident Cauſes which produce it, and by uſing the contrary; as,

1. Avoiding *Waters*, *fat*, *acerb*, *acid*, *auſtere* or *viſcous Vegetables*, and all *Drinks* half *boiled*, and half *fermented*, *turbid* or *acid*.

2. The

2. The moſt convenient Diet, is that of *Fleſh-Meats*, in which there is a *fœtid Oylineſs*, and a natural *Saltneſs*, and no *Crudities*. The moſt convenient *Liquor*, is *ſmall Ale* for conſtant Drink, or elſe *ſmall Wines*.

The Phyſical Taſtes in our Diet which help a weak Digeſtion, are, the *aromatic*, the *ſalt*, the *bitter*, the *acrid*, or *vinous Taſte*, theſe help the Fermentation in the *Stomach*, and are to be commonly mixed with our Meats.

The Fleſh-Meats of an eaſie Digeſtion, are the Fleſh of all young Animals, as *Pig*, *Lamb*, *Rabbit*, *Chicken*, *Potched Eggs*, and *freſh Fiſh*; but the Diet which has the Phyſical Taſtes above-mentioned, is more eaſily digeſted by weak Stomachs. *Bread* well fermented, and *ſmall Ale*, are the moſt eaſily digeſted by a weak *Engliſh* Stomach.

Salt Meats excite the *Appetite*, keep the *Body* open, cut the *Phlegm*, ſtrengthen the *Stomach*, and help *Digeſtion*.

3. Motion helps the Depuration of *Wines*, if carryed in a Ship, or ſhaked; ſo exerciſe helps the diſtribution of the *Chyle*, the circulation of the *Blood*, and ſecretion of *Humours*, and the digeſtion in the *Stomach*, as well as ſanguification

of

of the *Chyle*, for an external Motion of *fermenting Liquors* promotes the internal Agitation of Parts, in which the nature of Fermentation consists.

4. Instead of Fear and Sadness, Joy and Anger are to be indulged; for these make a brisker Motion of *Humours*; but the former check the Expansion of our *Spirits*, and cool the *Body*.
5. All natural Evacuations of *Humours* must be restored; but too much *Venery* cools the *Humours*.
6. A serene and clear thin Air helps Digestion, by giving a greater expansion to the *Spirits*.
7. Cares and Watching excite the *Animal Spirits* to a brisker Agitation; but long Sleep dulls them: Sleep of 7 or 8 hours is sufficient.

II. The Second Intention respects the correcting the Ferment, and the Faults of the *Humours* from whence it arises, and the Evacuating of the quantity of any preternatural *Humours*, by Vomiting and Purging, which is described in the Cure of the following *Cacochymia's*.

III. The Third Intention, is the Suppressing of all preternatural *Evacuations*, which will be described in the Cure of them.

IV.

IV. The ſupply of the Defect of the Ferment, by Medicines like it in Taſte and Vertue.

V. The Diſeaſes of the *Stomach* are to be cured by the preſcribed Method for thoſe particular Diſtempers, ſo they are of *want* of *Appetite*, *Inflammations*, or *Pains* of the *Stomach*, the ſtopping *Evacuations* by *Vomit* or *Stool*, &c.

The following Taſtes are the general Digeſtives in all the old *Cacochymia's*, which depend on a low Fermentation. Theſe promote the Fermentation of the *chylaceous Maſs*, the Circulation of *Blood*, and Secretion of *Humours*. Theſe deterge the *viſcous Phlegm* from the *Membranes* of the *Stomach*, and corroborate its *Fibers*; and upon theſe accounts theſe Taſtes are the general *Stomachics*.

I. The *Creſſe Acrids*, as *Horſe-Radiſh*, *Scurvy-Graſs* infuſed in *Wine* and *Muſtard-Seed*.

II. The *Corroſive Acrids*, as *Aaron-Roots* in *Powder* or *Wine*, and *Pulvis ari Compoſitus*; theſe Two Taſtes quicken the *Appetite*, and *Garlic* preſerved does the ſame.

III. The *Bitter Acrids* of a *Wormwood* Taſte, as *Conſerve* of *Wormwood*, and *Wormwood* in *Rheniſh* or *Sack*, or *Wormwood-Cakes* made with the *Oyl* and *Sugar*.

IV. The *bitter nauſeous Plants*, as *Centaury*, *Buck-Bean*, *Gentian*, of which *Thea* may be made

made or *Wines* by Infuſion, and *Aromatics* added, or *Sal volatile* taken with them.

V. The *Aromatic Acrids.*

1. Of the ſweet Claſs very burning or biting, as *Ginger*, *Galanga*, *Calamus Aromaticus*, *Orris*, *Zedoary*, *Cardamum.*
2. Of the ſweet *Fenil* Claſs, as Seeds of *Fenil*, *Aniſe*, *Caroway*, *Cummin*, *Dill*, *Angelica*, and *Imperatoria* Roots.
3. Of the *Laurel* Claſs, as *Orange* and *Limon* Peals, *Winter-Bark*, *Bay-Berries*, *Cloves*, *Cinnamon*, *Lign'aloes*, *Nutmegs*, *Jamaica Pepper*, *Myrtil-leaves*; and theſe are properly infuſed in *Wine*, or made into *Powders*, or *Lozenges*, as of the *diſtilled Oyls*, of *Oyl* of *Cinnamon* and *Cloves.*
4. Of the *Corroſive* Claſs, as *Pepper*, *Cubebs*, *Species Diatrion*, *Pipereon*, *in rotulis.*
5. Of the *Terebinthinate* Claſs, as *Juniper-Berries* Candied, as in *Rheu*, *Balſamum Peru*, *Mechæ*, *Maſtich.*
6. Of the *Bitteriſh Styptics*, as *Roſemary*, *Mint*, *Marjoram.*

VI. The *Mineral Sulphurs* which exagitate the *Animal Oyls*, and ſo promote Fermentation, as *Chalybeates*, *Antimonial*, and common *Sulphur.*

VII. The

VII. The *teſtaceous ſtony Medicines*, and all *Salts*, volatile and fixed, the Aſhes of *Vegetables*, and Calces of *Minerals*, are *Acidities*.

VIII. All theſe Taſtes preſcribed in the Cure of the Defect of a *Ferment*, ſupply its Office, and contain an *Animal Ferment* in them. As,

1. The *Mucous*, *ſub-Acid*, *Fætid* Diet, made of *Animal Humours*; as *Cheeſe*, the inward Skins of *Gizards*, which have the Tincture of the *Gall*, or ℥i of Rennet of a *Hare*, or *Calf*; all *Meat* or *Fiſh* ſomewhat putrefied, as *Anchoves*, *pickled Oyſters*; and outwardly we apply *Leaven*, with the *Juyce* of *Mint*.
2. By *Artificial Sauces* we imitate the natural *fætid* and *ſub-acid Slime* of the *Stomach*, as in *Catchupmango Plumbs*, *Muſhrooms*, and ſome *Indian* Liquors or Sauces of *Garlic*, *aſſa fætida*, — *Salt*, and *Aromatics*, *Muſtard-Seed*, with *Vinegar* in common *Muſtard*.
3. By the *ſalſo-Acid* Medicines, as *Tartar. Vitriolat. Sal Armoniac. Arcan. Duplicatum*, *Terra Ful. Tartari*, *Lixivium* of *Lime* and *Oyſter-Shells*, we help Fermentation.
4. By the *vinous*, *ſweet*, and *ſub-acid Spirits* or *Juyces*, *Spiritus nitri dulcis*, ſweet *Spirit*

rit of *Salt*, *Spirit* of *Bread*, *Elixir Vitrioli*, *Spirit* of *Maſtich*, which is *Acid*, *Spirit* of *Verdegreaſe*, *Juyces* of *Citrons*, *Limons*, *Oranges*, *Berberries*, *Currans*, *Spirit* of *Vinegar*, all ſharp *Rheniſh Wines*, old *Hock*, *conſerve* of *Hips*, *Water* of *Vine Leaves*, or other *acid Juyces*, and all *phyſical*, *aromatic Vinegars*.

Acids before Meat excite an Appetite, *Salſo-Acids* with Meats, and *Aromatics* are good after Meat to help Digeſtion.

Fourthly, External Applications are deſcribed below, which encreaſe the heat of the *Stomach*, and ſtrengthen the *Fibers*.

CHAP.

CHAP. V.

Of the Mucilaginous *State of* Animal Humours, *and eſpecially the* Chyle, *and* Chylous Lympha's, *which is uſually called the* Pituitous Cacochymia.

THE Food of *Animals* contains in it much of a *ſweetiſh Mucilage*, as is in all *Corn*, *Graſs*, *Milk*, and the *Legumens*; neither does *Fleſh-Meat* want their *Slimineſs*. The *White* of an *Egg* is *ropy*, *ſlippy*, and is a *nutritious Lympha* ſeparated from the *Chyle* by the *Glands* of the *Ovarium*. The *Decoctions* of *Fiſh* have a great *Mucilage*; and the *Gellies* of *Broth* ſufficiently prove the *viſcid Slimineſs* in the *Fleſh-Meats* we eat.

From our Food *Animals* neceſſarily take the matter of their *Mucilaginous Humours*, as will appear by theſe Cauſes of *Phlegm*.

1. All

1. All *Drinks* occaſion a great quantity of *ſlimy Phlegm*, which is only the *Mucilage* of *Barley* extracted from the ſolid Parts of the *Grains*. All *Mault-Drinks* may be boiled into the Conſiſtence of a *ſlimy Syrup*, or that of a *Plaſter*.

All *ſweet Fruits* have their *Mucilage*, as *Grapes*, *Gooſeberries*, &c. and therefore theſe yield much *phlegmatic Matter* in Digeſtion; and all thick *Wines* made of them are accounted *Phlegmatic*.

All the *Legumens*, as *Peas* and *Beans*, have an evident *Slimineſs*; and ſo have all *Cakes*, and cruſty baked *Pyes*, or ſuch like; and all *Meats* prepared of *Flower*.

All the *Olera*, as *Cabbage*, *Turnips*, *Lettuce*, *Spinage*, *Cucumbers*, *Melons*, &c. have an evident *Slimineſs*, which they always produce in *Animals*, who eat them.

This *Mucilage* in *Plants* is their *crude Juyce*, and is of an *Oyly* Nature, as appears evidently in *Linſeed*; this is of a cooling quality, as *Phlegm* is accounted: from their *crude Slime* many *Plants* prepare their *ſweet*, *bitter*, *acrid* or *aromatic Taſtes*; and *Phlegm* is a *nutritious Juyce*, which may be farther digeſted into *Blood*.

The *Nervous Parts* of *Animals* yield the greateſt *Slime*, as the *Calves Feet* and *Head*, the *Guts* are Membranes of *Animals*, the ſhavings

ſhavings of *Horns*, and the decoctions of *Bones*. The *Liver*, *Spleen*, and *Brains*, have much *Slime*.

Fiſh and *Water-Fowl*, who feed of turbid and muddy ſlimy Water, are accounted to be the Cauſes of *Phlegm*, eſpecially *Eels*.

All Fleſh full of Nouriſhment, as *Beef*, *Pork*, *Gellies*, *Gravies*, and *Eggs*, increaſe the matter of *Phlegm*.

Young Creatures, as *Pig*, *Lamb*, &c. yield a very great *Slime*, if eaten too young.

Goats-Fleſh eats very *ſlimy*.

All *fat Meats* are *ſlimy*, and of hard Digeſtion; and *fat Bodies* are uſually *phlegmatic*. *Oyl* has a *Slimeneſs*, and ſo has Fat always joyned with it.

Milk breeds much *Phlegm* from the Caſeous parts in it; and *Butter* is accounted *phlegmatic* from its oyly fat parts.

Too great a quantity of Meat, and often Drinking great quantities, breed a *Slimineſs* in the *Chyle*, by hindring the Fermentation of the Meat, and its perfect Diſſolution.

2. *Sleep* and *Idleneſs* hinder the circulation of *Humours*, and produce a ſtagnation of them, by which, their *viſcid*, *oyly* or *fibrous parts* cohere and unite into a *Slime*.

3. A *Mucilage* is increaſed in the *Humours* by a fenny, wet Countrey, or moiſt Air, which clogs the *Spirits* fermenting; and a cold Air

 coagulates

coagulates the *Humours*; ſo the *lymphatic Liquor*, expoſed to the Air, immediately grows *thick* or *gellies*: and all our *ſtrong Broths* grow *thick* and *viſcid* by cooling.

4. *Cares* and *Sadneſs* ſtop the Motion of *Humours*, and thicken them; and hence it is that melancholy Perſons are *phlegmatic*, and ſpit much *viſcid Phlegm*.

5. The Suppreſſion of Evacuations, as the *Menſes* in Girls, and ſtoppage of a *Cough*, or *Spitting*, encreaſes *Phlegm* in the *Stomach*.

6. *Hæmorrhages*, long *Fevers*, *Fluxes* of the *Belly*, or other *Chronical Diſeaſes*, produce much *Slime*.

8. Thoſe who have been born of phlegmatic Parents, or live in a moiſt, cold Countrey, near ſtanding Waters, or the Sea-ſide; thoſe who are of a great Age, for want of a perfect Digeſtion; and thoſe who are very Young, as Children, through their much and diſorderly eating; Women, by reaſon of the leſſer degree of Fermentation in that Sex, abound moſt with *Phlegm*. The Cold and the Moiſture of the Air ſtopping the *Pores* in the Winter-time, makes that Seaſon to be accounted moſt *phlegmatic*.

9. The *Mucilaginous* Temper of the *Blood*, *Chyle*, and Ferment of the *Stomach*, is natural to ſome Conſtitutions, who diſſolve their Meat only into a *Mucilaginous Juyce*, which is

is the greateſt Crudity of our Digeſtion; and therefore, from this ariſes all our *Phlegm*; for that was accounted, by the Ancient Phyſicians, the coldeſt *Humour*; which being a *nutritious Juyce*, it, by only faſting, was turned into *Blood*.

This *crude Chyle* ſwims in the *Blood*, and appears as *Milk* in the *Blood*, let out of ſome Perſons who are greatly *Cachectic*; and by putting *Spirit* of *Harts-Horn* to ſuch *milky Blood*, I have turn'd it *reddiſh*, or of a *roſy Colour*. Such was the *Blood* of a Gentleman who had drank hard, and bled much; this *milky Blood* in him was never turn'd into *Serum*; but in others of a leſs *Crudity*, the *milky Chyle* is imperfectly turned into *Serum*, but that is very much in quantity, and *watery* or *inſipid*, rather than very *ſalt*.

The Sanguification is hindred for want of an *acrid Bile*, and the *Saltneſs* thence proceeding.

The Circulation is hindred by the *viſcidity* of the *Slime*, and the Secretion of moſt of the *glandulous Humours*. The *Chyle* is never digeſted further than to a *nutritious Sweetneſs*, and from hence the habit of the *Body* is very *fleſhy* and *fat*; but the *Pulſe ſlow*, *ſoft*, and *weak*; the *Spirits* are *dull* and *torpid*; the *Bile ropy* and *ſweet*, rather than *bitter*, or *acrid*; the *Juyce* of the *Spleen* very *mucilaginous*, for

want of Digeſtion, and the *Blood* has more of a *gelatinous* Conſiſtence, than *fibrous*; and *Tumours* happen in the *Viſcera* or *Glands*. In the *Brain*, *ſleepy Diſtempers*, and *Dulneſs* of the *Senſes*, or *Stolidity* from the *thick Slimineſs* of the *nervous Juyce*; the *Urin* is *pale* and *wateriſh*, with *thick* and *white farinaceous Contents*, or without any, if there be *Obſtructions*, and an *Appetite* is wanting.

The *Sweats* are *cold* and *viſcid*, for *Phlegm* offends by both thoſe qualities.

The *Succus Nutritius* abounds with *Slime*, and cauſes a *leucophlegmatia*, or *pale Tumour* of the habit of the *Body*.

The *Seminal Lympha's* are *cold* and *ſlimy* in Sterilities, and the *fluor albus*, or *Gonorrhœa ſimplex*, and ſo becomes unfit for the uſe of a Ferment in Generation.

The *Lympha lactea* is moſt abundant in the *phlegmatic*, for that is immediately produced from the *mucilaginous Chyle*, and ſeparated by the *Glands* of the *Mouth*, whence the *ſlimy Phlegm* is hawked up; and this is plentifully emptied into the *Stomach*, where it cauſes a *loſs* of *Appetite*, a *ſaburra pituitoſa*, and *windineſs*; and in the *Lungs* it cauſes *Coughs*, and *ſtoppage* of *Phlegm*, or *dyſpnœa*, with Laſſitude in the *Limbs*, a ſlow *Fever*, and *Paleneſs* of *Urin*, and of the *Countenance*, and *Palpitation* of the *Heart*, which are the ſigns of a

pituitous

pituitous Cachexia, evident in the *Green-Sickneſs*.

All outward *œdematous Tumours* ariſe from the *ſuccus nutritius* of a *pituitous Temper*.

This *Chyle*, and the *Lympha lactea*, is the natural and alimentary *Pituita*, which the Ancients deſcribed as *inſipid*: τὸ δὲ φλέγμα ἄποιον καθάπερ ὕδωρ, is *Galen's* deſcription of it; this is the *humid*, *cool*, and *ſweetiſh* part, which is ſo agreeable to the Taſte of the *Blood*; and they eſteemed that *Blood pituitous* naturally, which abounded with an exceeding quantity of *ſweetiſh Chyle*, which remained ſomething undigeſted in the *Blood*, and was not wholly ſanguified, but capable of it; this, of all the *Humours* to the touch, was, ψυχρότατον, or *coldeſt*, and they called it moſt *viſcid*, or γλιχρότατον, when it is made ſo by the great Ebullition of *Blood* in *Inflammations*, for they thicken it into that *tough Skin* which covers the *Blood*, when cooled in the Diſh.

But when this *chylaceous* part of the *Blood*, or the *Lympha's* thence ariſing, become preternatural, *Galen* deſcribes the *Phlegm* thus, ἀλλὰ ἐκτρεπώμενον τῆς κατὰ φύσιν ποιότητος, ὐκ ἀλικὸν μόνον ἀλλὰ καὶ ὀξὺ, μεταλαμβάνει δὲ ποτὲ καὶ γλύκηας ποιότητος. The *lacteal Lympha's* have their *Acidities* from *Stagnation* in their *Glands*, or the *Tartar* abounding in *Chyle*. They have their Saltneſs from the Saltneſs of *Chyle*, and that of the *Serum* in *Catarrhs*.

In reſpect of the Conſiſtence, the *Pituita* is watery and thin, or mucous, or ſlimy, or tenaceous, when the thin parts are evaporated, the *vitreous Pituita* is from the thickneſs of *Chyle*, or its *Stagnation* in the *Lungs*, and this is clear, like *Gum-tragacanth* diſſolved. *Cold* may coagulate a *pellucid Lympha* into ſuch a Conſiſtence.

The *Tartareous* or *Gypſea Pituita* is from the earthy petrefying Parts, mixt with the *viſcid Phlegm*, which is *Salſo-acid*.

By the following ſigns, the *Ancients* gueſſed at the differences of the *Pituita*.

1. By the *pale*, *clear Urin*, and *want* of *Appetite*, they diſcerned the *inſipid Phlegm*, or the loweſt ſtate of Digeſtion.

2. By a *pale*, *thin*, *milky Water*, and the *greatneſs* of the *Appetite*, they knew the Acidity of the *Phlegm*.

3. By a *lacteal*, *pale*, *thin Water*, with a *globous troubled Reſidence*, (and the *Cholic*) they gueſſed at the *vitreous Phlegm*; but this is frequently ſpit up, and evacuated by *Stool* or *Urin*, and ſo beſt obſerved.

4. By the *Citrine Urin* of a thicker Conſiſtence, and high-coloured Sediment, the *Saltneſs* of *Phlegm* is known.

The *Mucilaginous* State of *Humours* is to be Cured,

Firſt,

First, By avoiding the Diet, and all the other evident Cauſes above-mentioned, which produce them, and uſing the Diet mentioned in the Cure of a *weak Digeſtion* or *Fermentation*.

The Diet in which there is leaſt *Slime* is beſt, as *Wheat-Bread* well baked, and dry; *Wine* and *Water*; the Fleſh of *Birds*; roaſted Meats, as *Mutton*, *Rabbit*, *Larks*, *Sparrows*; and all ſalt Meats, or broiled Meats.

Faſting ſpends the *Phlegm*.

Secondly, The abundant *mucilaginous Phlegm* muſt be evacuated,

I. By *Vomiting*; and thoſe of,

1. A. *bitter*, *acrid* Taſte, as *Vinum Scylliticum*.
2. Or *vitriolic* Taſte, as *Sal Vitrioli*.
3. Or *Sulphureous*, as *infuſio croci Metallorum*.
4. *Mercurial Styptic*, as *Merc. Vitæ*.

II. By *Purgers*.

1. *Aloetics*, which are *acrid*, *bitter*, and *nauſeous*, as *Tinct. Sacra*, *Pil. Hieræ cum Agarico*, *Aloephanginæ*, *Stomach. Maſtichin. de Ammoniac. Pil. Fœtid. cum Gummi*, *Aloe Roſata*, *Elix. Proprietat.*
2. By *acrid Purgers*, as *Jalap*, *Agaric*, *Scammony*, which contain an *acrid*, *corroſive Roſin*, with a *Slimineſs*.

3. By *Mercurials*, a plentiful Evacuation of *phlegmatic Humours* are procured, for the *acid Phlegm*, like *Spittle*, eaſily mixes with the *Mercury*, and *Mercury* injected into the conglomerate *Glands*, through the *Artery*, eaſily paſſes them.

III. By *Sudorifics*, which are *bitter* and *acrid*, as Decoctions of the *Woods*, for the *Sweets* often appear *glutinous*, and ſmell *acid* or *ſowre*.

IV. By *Diuretics*, the *Phlegm* is ſometimes evacuated, or, at leaſt, corrected by their *Acrimony*.

V. In Women, *Acrid Peſſi* evacuate an *albuminous Pituita* from the *Vagina*.

VI. By the *Errhines* (which alſo excite a *Cough*) from the *Noſe* and *Lungs*, a *Pituita* is evacuated.

VII. *Salivation* and *Maſticatories* evacuate conſiderably, but *Salivation* many Pints of *Phlegm* in a Day, and very much by Chewing of *Tobacco*.

Theſe are the natural Evacuations of the *pituitous Lympha*, which the *Phyſicians* procure by Art, and imitate the natural Evacuations of it, through the *ſecretory Glands*.

Thirdly, The Fermentation of the *Chyle* is to be reduced to its natural degree, by the Taſtes above-mentioned, in the Cure of a *weak Digeſtion*; and, 1. More

1. More particularly all *acrid* and *bitter Gums* ſeem appropriate *Specifics* by their *mucilaginous* Conſiſtence, by which they adhere to the *Slyme*; but by their *Bitterneſs* they deterge it, and by their *Acrimony* diſſolve it; ſuch is *Ammoniacum*, *Bdellium*, *Galbanum*, *aſſa fætida*, *Myrrha*, and all *terebinthinate Gums* and *Balſams*.

2. The *ropy* Conſiſtence of *Wines* is cured by a *Lixivium* made of *Vine Branches*, by *calx viva*, or *Chalk*, or *Flints* burnt, which precipitate the *crude Tartar* with the *Slyme*; and for the *Phlegm*, we uſe the Aſhes of *Vegetables*, and the Calces of *Minerals*.

3. *Ropy Wines* require *Styptic* Precipitators, as *Alumen uſtum*; or *Salſo-Acids*, as *Bay-Salt*: and the *bitter Styptics* may effect the ſame in the *Blood*, as *Aſh-Bark*, and the *Cortex Peruvianus*. We add *Salt* to our *Dough* to attenuate its *Mucilage*; and *Sal Armoniac.* and *Tart. Vitriol.* diſſolve the *Phlegm*.

4. We uſe *bitter Acids*, as *Elixir Proprietatis*, or *ſpirituous Acids*, to deterge the *Phlegm* of the *Stomach*, and the precipitating of it; and for this reaſon we ſulphurate the Veſſels of *ropy Wines*.

5. All the *bitter*, *nauſeous Medicines* deterge the *Pituita*, as *Gentian*, *Ariſtolochia*, &c. and the *bitter ſlimy*, as *Carduus*, &c. help the clearing of *Beer*.

6. The

6. The *ropy Phlegm* is diſſolved by *volatile* and *fixed Salts*, which diſſolve all our *mucilaginous Gums*; and for this end *Sylvius* preſcribes *Sal Volatile Oleoſum* with our Diet, or immediately after it, which may be uſed then with *Milk*, *Water*, and *Sack*.

Stum is added to *ropy Wines*, and *Spirit* of *Wine*, that we may excite a new Fermentation in them: and by the ſame Experiment we are taught to uſe all things of a fermenting nature, both in our Diet and Medicines; for nothing diſſolves the *Viſcidity* of a *mucilaginous Liquor* like giving it a Fermentation; ſo the white of an *Egg* is diſſolved into a *Colliquamentum* by the Incubation of a *Hen*, which is alſo made very liquid or fluid by becoming rotten, and putrefied by keeping; and then, if *Eggs* be boyled, they will never grow thick, like *new Eggs* boiled.

The White of an *Egg* is made thin, and more fluid, by beating of it; and from hence we learn, that much Exerciſe attenuates *Humours* that are ſlimy, and Fermentation does the ſame, which is an internal Agitation of Parts, whereby the *Viſcidity* of *Vegetables* is diſſolved in any Liquor, as in making of *Mault-Liquors* and *Wines*.

All new Liquors before they have undergone a full Fermentation are ropy and ſticking, but by that their Conſiſtence becomes more fluid.

By

By Experience we find that all hot fermentative Medicines, as *oyly*, *reſinous Vegetables*, *Steel* and *Salts*, cure the *pituitous Cacochymia* in the *Green-Sickneſs*; and to ſuch Perſons we give *Stum* it ſelf, as a great Ferment to their *cold Humours*.

Quickſilver Medicines eaſily mix with *Phlegm*, and ſo are fit to evacuate it; but by its *Acidneſs* it ſeems to depreſs the Fermentation of *Humours*, and ſo is not a fit Medicine, as an alterer in this *Cacochymia*.

Fomentations of *Wines*, and *aromatic Aſtringents*, or *Brandy*, which flames, and *Aromatics* infuſed, hot *oyly* and *reſinous Plaſters*, or *Cataplaſms*, excite and cheriſh the inward Heat and Digeſtion; and outward Heat helps the Digeſtion and Putrefaction of all other Bodies, whether *Vegetables* or *Animals*.

The greateſt quantity of the *ſlimy Pituita* is lodged in the *Stomach*, and without a *Vomit* it is almoſt impoſſible to remove the great quantity of *phlegmatic Humours*. I found a great quantity of *Phlegm* in the Stomach of a *Pig* fed with *Peas*, which could not proceed immediately from the Meat it ſelf, becauſe, though that was diſſolved, it differed in Colour and Conſiſtence from the *Phlegm*, and in Taſte alſo; beſides, in the *glandulous ring* above the *Gizards* of *Birds*, there is a *viſcid Phlegm*, though the *Corn* paſs through it intire

and

and unbroken into the *Gizard*; this *Phlegm* then ariſes from the *Chyle*, and paſſes through the *Glandules* of the *Stomach*, to whoſe *Skins* it conſtantly adheres, and Fomentations outwardly may help the Secretion of it through its *Glands*, and the Diſſolution of it from the *Stomach*.

That Fermentation is the moſt natural way of Curing the *phlegmatic Cacochymia*, appears by our ordinary Preparation of Bread; for the Ferment and Baking perfectly corrects the *ſlimy Mucilage* of *Corn*; and we obſerve how *heavy* and *ſlimy*, and how *hard* to be digeſted, all *Bread* unfermented or unleavened proves.

If we view *Mucilages*, ſuch as the *White* of an *Egg*, or *Cherry-Tree Gum*, diſſolved in the magnifying Glaſſes, we cannot diſcern any *Globuli*, but an uniform Conſiſtence. The ſmall *Particles* of *Mucilages* exclude all Air, and cohere cloſe, which makes them ropy and tenaceous; but if we look upon *Milk*, which is little different from *Chyle*, and therefore is made out of the *mucilaginous Juyces* of *Plants*, we may obſerve the *Particles* of *Milk* to be only a heap of *Globuli*. Fermentation makes all *mucilaginous Liquors* fluid, by agitating their *Particles*, and dividing into ſmall Parts the *viſcous Maſs*; ſo that the Air may incompaſs each *Particle*, and form them into

Globuli

Globuli, as it does great Drops of Water in the falling of Rain. Water is nothing else, as it appears in those Glasses, but a *Congeries* of *Globuli*; by which Observation, I may probably guess, that the nature of Fluidity consists in having the small *Particles* of *Liquors* divided into *Globuli* by the Air; and the nature of a *Mucilage*, in having no Air intermixt betwixt its *Particles*, nor globular Figure to yield upon any Pressure or Motion. We observe in fermented *Bread* how many airy Bubbles are intermixt in the whole Mass after Baking; and also in all fermenting *Liquors*, how full of Air the Fermentation makes it. *Barm* it self is almost all Froth, whose Efficacy lies in exciting the *Spirits* of the fermenting Liquor into an Agitation, to break its Viscidity, and admit the Air to frame the *Globuli* necessary to all Fluidity. We could not observe any Motion in the *Globuli*, to which the Fluidity of Liquor might be imputed, but seemed wholly owing to the globular Figure of the *Particles*, which appeared clearly in Water, the most fluid of all our Liquors.

Oyl and *Butter* appear in the Glass of the same uniform Figure as the *Mucilages* do, and this makes them easily to mix together.

I mixt divers Medicines with a *Mucilage* of *Quince-Seeds*, and the *White* of an *Egg*, that

that I might thereby inform my ſelf more in the nature of *Mucilages*, and their Coagulations.

Spirit of *Vitriol* ſoon coagulated the *Mucilage* of the *Seeds*.

Green Vitriol and *Alum* thickened the *Mucilage*, and the *White* of an *Egg* was curdled by *Alum*.

Common *Sal Armoniac.* and common *Salt*, rather thinned than thickened the *Mucilage*, but made no great change, nor *Cream* of *Tartar*.

Salt of *Wormwood*, and *Sp. Sal. Armoniac.* made the *Mucilage* more thin, and gave it a *Marmolade* Colour.

Brandy made no Alteration in the *Mucilage*, but curdled reddiſh on the top of the *White* of an *Egg*.

Aqua Fortis and *Saccharum Saturni*, turned the *White* of an *Egg* into a coagulated *Milk*, which ſhewed the Original of the *Animal Slimes* to be from *Chyle*.

The Heat of the Fire ſeemed to make the *Mucilage* more thin; and to dry it into a Skin, like the *Mucilage* of the *conglomerate Glands* of the *Joynts*, which, as Dr. *Havers* informs us, is like the *White* of an *Egg*, of a *ſaltiſh* Taſte; and this, he ſays, with the Heat of the Fire, turns into a *Liquor* more tenuious than it is naturally, and produces upon Evaporation

poration a thin film on the top, with ſome little *white Coagulum*, and what remains is not a thirteenth part. He made theſe further Experiments on it.

Vinegar coagulated it, but *teſtaceous Medicines* would not diſſolve it.

Claret, which is *Styptic* and *Acid*, produced a Coagulation like a *Jelly*; but *White-Wine* and *Sack* leſs. *Alum*, *Vitriol*. *Sacc. Saturni* coagulated it; and *Vinegar* more, than *Oyl* of *Vitriol*.

Sal Armoniac. diſſolved all the Coagulations by *Acids* or *Styptics*, and ſo does *Oleum Tart. per deliquium* made without *Niter*.

Aqua Fortis and *Spirit* of *Niter* coagulated it like *Milk*.

Styptic Plants, as decoction of *Galls*, *Red Roſes*, the *Cortex*, coagulated it.

Theſe Experiments being made on an *Animal Mucilage*, ſhew the Coagulation of it by *Acids*; for which Reaſon I tranſcribed them from the Ingenious Dr. *Havers*'s Book.

CHAP.

CHAP. VI.

Of the Tartareous Acidity or Acerbity of Animal Humours, *especially the* Chyle *and* Lacteal Lympha's, *which commonly appears in the sourness of our Stomachs.*

ALL *Vegetables* have their Tartar or Sour part, altho they Taste nothing of it, but are very *Bitter*, yet their Juyces being Boyled to an Extract, manifest their Tartar to the Taste, as in Extract of *Wormwood*.

All Liquors prepared from *Vegetables*, and Bread made of them, are apt to sour by keeping, and therefore manifest the *Tartar* which lay concealed in it before, under the sweet oyly Taste.

Not only *Vegetables*, but the *Animal Chylous Juyces* have a sour *Tartar* in them; for *Milk* which is a depurated *Chyle*, sours by keeping,

keeping, and *Butter-Milk* has an evident *Acidity* in it. The *Chyle* of *Animals* is often obſerved to be coagulated by its own *Innate Tartar* in the *Glands* of the *Meſentery*, or other *Viſcera*, where Cheeſie coagulations are often cut forth.

The *Milk* in the *Breaſts*, is often coagulated by its own *Acidity* or *External Cold*, and by its *Stagnation* produces *Tumours*.

The *Lacteal Lympha* is often coagulated in the *Conglomerate Glands* of the Mouth, Noſe, Throat, and in the Bladders of the Lungs, by its own *Tartar* or *Cold*; and the taſte of the *Saliva* is often obſerved to be Sour.

The *Serous Salt Lympha* is coagulate in *Rheumatic* pains in the *Lymphatics*, and in the *Conglobate Glands* in *Scrophulus Tumours*.

The *Lympha* of the *Nerves* may be coagulated in the *Palſie* and *Cataracts*.

The *Blood* it ſelf is coagulate and grumous from too *Acid Chyle*, which cauſes a low Pulſe and Fainting.

The auſtere Juice of the *Spleen* produces obſtructions in the *Hypocondria*, and coagulates the *Bile* like *Alum*.

The Contents of the *Guts* being auſtere, they produce *Cholics*, and the binding of the *Belly*, and a compreſſion in the *Stomach* and *Breaſt*.

If we consider only the *Principles* which *Chymistry* extracts from *Animal Humours*, we shall find no sensible *Animal Acid* pure and evident in them; for they only shew us a *volatile Salt*, and *fœtid Oyl*, and *phlegmatic Water*; but if we examine the *Stomachs* of *Animals*, and both Smell and Taste the *Contents*, there we shall observe a manifest *Acidity*; from whence I shall observe, that our bare Senses, if diligently imployed about natural subjects, inform us more truly than the *Chymical Experiments* by strong Fires, about the Nature of them.

A different Quantity and Quality of *Acids* appears in the *Stomachs* of *Animals*, according to the difference of their Meats.

In the *Stomachs* of *Rabbits* a manifest pungent *Acidity* may always be observed, if they feed on *Grass*.

In the *Stomach* of a *Lamb* an *acid* Taste and Smell may be observed very different from the former, like the *Sowreness* of *Milk*.

In *Birds* who feed on *Grass*, the same *Acid* Smell appears as in *Rabbits*.

In the *Carnivorous Animals*, and in *granivorous Birds*, the *Acid* is less evident, and their *lymphatic* Ferment tastes *insipid* or *sub-acid*; but the *Contents* of *Carnivorous Stomachs* coagulate *Milk*; and I believed the Digestion of *Ram* and *Beef* was *sub-acid*, as I observed.

From

From hence it appears, that *Acidity* is produced by the Digeſtion in the *Stomach*, and is only a conſequent of it, and not the cauſe. *Acidity* is more obſervable in Young Creatures, who feed on Liquids, than in the Elder; but theſe ought to have had a ſtronger *Acid Menſtruum*, (if our Meat were to be diſſolved by it) which, if it were as ſtrong as *Aqua Fortis*, it could not diſſolve *Corn*, which is very eaſily diſſolved by Fermentation, for it is nothing but the ſweet *ſlimy Juyces* of *Plants* which yield the Nouriſhment to *Animals*, and that is eaſily diſſolved out of the *Bladders* of *Plants* by any *Menſtruum*, and as eaſily prepared by Fermentation; for its becoming a *nutritious Juyce*, and the ſolid *Bladders* and *Fibers* of *Plants* mixt with a *Slime* and *Choler*, conſtitute the Excrements of *Granivorous Birds*.

This *Acid* is natural, and neceſſary to the Health of *Animals*.

1. To help *Digeſtion*, and excite *Appetite*. *Leaven* has a *ſpirituous Acidity* in it, and then it ferments beſt. Not every *Acid* helps the *Digeſtion*, but a *ſpirituous Acid* is chiefly required; and thoſe *Acids* which are well tempered by a *Salt* or *Earth*, as common *Salt*, or the *Sal Armoniac.* of *Animals*.

2. By the *Acid* of digeſted Meats the *Choler* is coagulated in the *Guts*, and there the

Animal ſalſo-Acid is produced, the *Blood* is cooled, and its *Conſiſtence* thickened, and the *Volatility* of its *Salts* allayed.

3. All *Acids* in *Animals* are from our Food, and when the Food contains a greater *Acid*, the more of it appears in the *Stomach*, as in *Cyder*, *French* and *Rheniſh Wines*, *Vinegar*, *Sorrel*, *Verjuice*, *Limons*.

4. All *Acidities* are produced naturally by Fermentation; ſo *Herbs*, *Fruits*, and all *Liquors*, as *Pottage*, *Milk*, whether fermented without, or in the Stomach, ſenſibly afford an *acid* Smell or Taſte. The cloſe union of the *Oyl*, *Acid* and *Earth*, which is naturally in all *Vegetables* and *Animal Bodies*, being looſened by Fermentation, which is an inward Agitation of *Particles*, the *Acid* begins to appear, as well as the *Oyl*, and both give a quick ſtrong Smell, and a ſpirituous quick Taſte to fermented Liquors.

This *Acidity* in the *Stomach* is *volatile*, like *Spiritus Salis*, *& Nitri dulcis*; and this *Acidity* gives the *Heart-burning* to *Animals*, if it be very ſharp and active; but if in a natural State, it paſſes firſt off the *Stomach*, and is corrected in the *Guts* by the *Choler*.

Our *Vinegars*, made of *Acid*, *Oleous Plants* for *Sawces*, reſemble this *Acid*, creating an *Appetite* in ſome, but in others, *Heart-burning* them, if *corroſive*, or meeting with a *choleric Humour* in the *Stomach*.

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5. The Reliques of the fermented Meat are more ſowre; ſo when we diſtil the *Spirit* of *Elder-Berries*, the *ſpirituous Acid* comes off firſt, and a more fixed *ſowre Acid* remains in the Still. This *Acid* may be compared to the *Sowreneſs* of *Acid Liquors*, whoſe *ſpirituous Parts* are evaporated, as *ſowre Beer*. The *Contents* of the *Colon* are of a *ſowre*, *fœtid*, *acid* Smell in *Rabbits*; but the *Acidity* of their *Stomachs* is more *grateful* and *ſpirituous*.

By a great Quantity of *Acid Meats* there are more *Crudities* produced than can be corrected by the *Animal Choler*; and then the *Chyle* and *Salts* are made very *Acid*, and the Conſiſtence of the *Blood* thickened like *Jelly*; and this ſort of Diet pleaſes moſt in hot Weather and *Fevers*.

When this *Acerbity*, or *tartareous* State happens, we obſerve it by *Sowreneſs* in the *Stomach*, which, like *Vinegar-Veſſels*, tinctures all our Aliments with the ſame Taſte, the *Belly* is bound, *Gripes* and *Windineſs* attend it, and all *ſowre Medicines* and *Meats* increaſe it; the *Blood* appears *grumous*, like the *Gellies* of *ſowre Fruits*, or like *Blood* mixed with an *Acid Spirit*; and therefore the *natural heat* is depreſſed, and the *Pulſe* low, and the *Urin* pale and turbid, ſharp or milky; and in Children, the *Bellies* ſwelled with *Ob-*

ſtructions of the *Meſentery*: In older Perſons, the *Acidity* which always abounds in the *Cholic-Guts*, give *hypochondriacal* or *ſplenetic Symptoms*; the *Face* looks *pale*; there is no *Thirſt* nor *Fever*.

The evident Cauſes of this *tartareous* State of *Humours*, are,

1. Food which abounds with it, as the *Fruits*, and *ſharp Liquors* made of *Vegetables*, *Red*, *White*, *Rheniſh Wines*, and *Cyder*, *ſtale Drink*; and all ſweet things, as *Honey*, *Sugar*, *Broths*, and *Milk*, and Spoon-Meats; and all ſorts of *Herbs* offend ſuch *Stomachs*, and produce great *Acidities*, as Experience daily confirms. *Well-Waters*, and *ſtanding Vitriolic*, or *boggy Waters*, are alſo very injurious.

2. Cold Air, in which a *nitro-ſulphureous Part* abounds, coagulates *Humours*, eſpecially the *phlegmatic Lympha's*, and increaſes *Acidities*, and a greater *Appetite* is produced.

3. Sadneſs and Melancholy breed an *Acidity*, by diſſipating the *Spirits*, and cauſing Stagnation of *Humours*, which alſo hinders the Separation and Exaltation of the *Oyl*, which naturally tempers the *Tartar*, and gives it a Fluidity in Liquors.

4. The *Binding* of the *Body* encreaſes *Acidities*.

5. A Defect in our Exerciſe produces it, for that is neceſſary to help the Diſtribution

and

and Digeſtion of our Nouriſhment, and the Circulation and Secretion of other *Humours*, and many times the Sweat ſmells ſowre, and ſo evacuates it that way.

The internal Cauſes of the *tartareous* State of *Humours*, are,

1. A depreſſed and weak Fermentation; and the ſame happens to *crude* and *unfermented Wines*, for want of a due Fermentation.

2. The *Acrimony* of the *Bile* is wanting, which being leſs pungent and bitter, it cannot correct the *Acidity* of the digeſted Meat, nor turn it into *Salt*, nor, conſequently, perfectly ſanguifie the *Chyle*, which is the chief office of *Choler*. In the *Jaundice* the *Choler* is wanting; and the *Icterical* have a great *Sowreneſs*, and *Gripes*, with *Windineſs*.

3. The *Chylous Humours*, like *Milk* kept in a hot Place, if they ſtagnate in the *Guts* or *Lacteals*, they ſoon coagulate, and become *Acid*.

4. Divers Diſeaſes which depend on a *vitriolic Acidity* in the *Blood*, and are produced by too high a Fermentation, as the *Hypochondriac*, and *hyſterical Diſtempers*, when they have long continued, weaken the natural Fermentation, and ſo produce that *Sowreneſs* in the *Stomach*, of which thoſe Patients complained very much.

The Cure of this *tartareous* State, is,

I. By *Vomiting*, with ſome gentle *Antimonial*, or *Wine* of *Squills*, or *Sal Vitrioli*.

II. By *Purging*, with *Aloetics*, as *Pil. Aloephanginæ*, *Salt* of *Wormwood*, and *Extract. Gent.* or *Tinct. Sacra*; adding *Æthyops Mineralis*, *Steel*, or *teſtaceous Powders*, to the *Aloetics*.

III. By correcting the *Acidity* or *Tartar*, by raiſing the *Fermentation* to its natural State, by the Medicines above-mentioned; the chief of which are the *acrids*, *aromatics*, *reſinous*, *bitters*, *chalybeates*, and *ſalt* Taſtes; ſo we add *Stum* to *crude*, *ſowre Wines*, to raiſe the Fermentation. *Alteratives* do more good than *Purgers* in this ſtate of *Humours*.

IV. The *Tartar* may be precipitated and carried off by *Urin*.

1. By *Lixivium* of *Lime* or *Oyſter-ſhells*, and both *fixt* and *volatile Salts*.

2. By the calces of *Minerals*, or aſhes of *Animals*, and *Egg-ſhells* burnt.

3. By *teſtaceous Medicines*, or *ſtony Minerals*, as *Chalk*, *Crabs-Eyes*, *Corals*, *Pearls*, *Egg-ſhells*, &c.

V. *Sudorific* decoctions evacuate the *ſowre Humours* by *Sweat*; as *Salts*, *Mineral Sulphurs*, and *bitter Acrids*.

VI. *Clyſters* draw off the *Acid* reliques reſtagnating in the *Colon*.

VII.

VII. The *Acrimony* of *Choler* is to be increaſed, and its Paſſage through the *Liver* promoted, by *bitter*, *acrid*, *Hepatics*, by *Steel*, and *Salts*, and *aromatic* or *fœtid Gums* or *Oyls*. The defect of the *Choler* is ſupplyed by thoſe Medicines which precipitate the *Tartar*, as all burnt *Animal* Aſhes, eſpecially *Eggs* and *Oyſter-ſhells*; ſo from *ſowre Wines* we precipitate the *Tartar* by burnt *Marble*, or *Flints*, or *Lime*, *Chalk*, or *Lixivium*; ſo *Vinegar* is ſweetned by *Crabs-Eyes*, and when the *Tartar* is precipitated, the *oyly Part* is raiſed, and that conceals and tempers the *Acidity* of *Tartar*.

VIII. The Circulation of ſtagnating *Humours* muſt be promoted by *Steel*, and *Salts*, and *aromatic*, *acrid* Taſtes.

IX. The Diet ought to be of *ſweet*, not *ſowre ſmall Ale*, of *Bread* well fermented, and *Fleſh-Meat*; but if the *Acidity* be much, no fermented Liquor in which there is *Tartar*, nor no *Vegetables*, nor *Liquids*, will agree with the *Stomach*; but theſe Phyſical Taſtes may be given to our Diet.

1. *Aromatic*; as *Pepper*, *Ginger*.

2. *Acrid*; as *Muſtard*, *Garlic*.

3. *Bitter*; as *Aloes*, *Wormwood*, and *hopp'd Drink*, and *Mum*.

4. *Saltneſs*; as all *high Brines*; for *Salt* it ſelf abates the ſowre in *Vinegar*, and *Oyſters* cure *Heart-burning*.

5. Roaſt,

5. Roaſt, and broiled, and baked Meats, and thoſe that are burnt, are moſt agreeable: Chearfulneſs, moderate Exerciſe, conſtantly keeping the Body open, and a dry Air and Marl-Pit Water, are very agreeable to *ſowre Stomachs*; and Springs flowing from Chalk-Stones, *Bath*-Waters, and ſtrong Chalybeate Waters in ſmall quantities, may agree well; and Wine and Water in many Conſtitutions for ordinary Drinks.

I have obſerved, That thoſe who have too much *Acid* in their *Stomachs* by a natural Inſtinct, refuſe all mealy Meats, and eat little Bread, as we obſerve thoſe who abound with much *Choler* to have a great Abhorrence to all bitter Medicines; and the obſerving the Diet of our Patients will frequently give ſome Intimation of the particular State of their *Humours*; for I believe it is generally true, that all Perſons naturally deſire that Food which is contrary to the preſent preternatural State of *Humours*, as *watery Liquors*, and *Acids* in *Fevers*, Aſhes, and Terrene Abſorbers in the *Sowreneſs* of their *Stomachs*, *bitter Drink* in *Jaundice*; a *weak Stomach* is pleaſed with ſtronger Liquors, and *hot Conſtitutions* with the ſmaller Drink: This agreableneſs of ſome Taſtes every Perſon naturally obſerves; and if they uſe them moderately, they may preſerve the natural State of their *Humours*, and correct the Diſorders of them. There

There is a remarkable Obſervation in Sir *Theodore Mayhern*, about the Uſe of *Diuretic Liquors*, which ought to be uſed after a perfect diſtribution of the Nouriſhment, to which he attributes much in the Cure of the *Scrophulæ*, by a *Diuretic Drink*, *qui Tartarum liquidum ante ſui coagulationem ad renes ablegare, & per veſicam expurgare, citra concoctionis præcipitationem, potuit.* From this Obſervation, I think a uſeful Rule ought to be drawn to uſe our *Diuretic Diet-Drink:* Towards 5 or 6 a Clock at Night, ſo many Hours after Meat, and, again, in the Morning, to carry off the *Tartar-Acid* of our *Chyle*; and to take ſome *teſtaceous Lozenges* or *Pills* with our *Diuretic Drinks*, which may coagulate with the *Acids* at that time.

CHAP.

CHAP. VII.

Of the flatulent, crude Cacochymia *of the* Chyle, *and other* Humours.

WHEN the Aliments are half fermented, and then are checked in attaining their perfect Diſſolution; or their Ferment is too weak to perform it, a *Windineſs* is produced in the *Stomach*, for the *Spirits* of the Meat being ſomewhat looſened, are lodged in a *ſlimy Maſs*, but cannot render it fluid, but only rarefie it into Bubbles, which diſtending by the heat of the *Stomach* burſt, and create *Eructation* or *Wind*. The moſt weak Stomach produces an *inſipid Wind*, but the *Acid Ructus* is a ſign of ſome degree of Digeſtion. In theſe Caſes there is an Oppreſſion, or Fulneſs at the Stomach, and Weight, *Ructus* frequently happen, and all hot Meats and Medicines agree well, but the cold ones do much Injury.

The *Stomach* it ſelf is loaded with *ſlimy, acid Phlegm*, which is its weak Ferment, and the *Guts* diſtended by Wind.

The

The Constitution of *Humours* is *crude*, *mucilaginous*, and *windy*, as appears by the *Paleneſs* of the *Urin*, and *Frothineſs*; and the *Spleen* is generally obſtructed and pained, and the *Stools* like *Barm*, the *ſerous Lympha* being vitiated by the ſame *crude*, *windy Chyle*, it produces a *Heavineſs* in the *Limbs* of the whole *Body*, and a *Fulneſs*, or *wandring*, *dull Pains*, &c.

The chief Effects of the *Wind* appear in the *primæ viæ*, where the *Chyle* ferments; or in the *Spirits*, which are made of the *crude*, *windy Spirits* included in the *Slime*; and for want of a due Volatilization, they produce in the *Nerves*,

1. A *Pandiculation*, or *Oſcitation*, or *Stupor*, or *Cramp* in the *Muſcles*; the *Noiſe* in the *Ears*, and *Vertigo* in the *Brain*, and *wandring Pains*.

2. *Inflations* of the *Parts*, as *Tympanitis*, and *windy Tumours* in the *Limbs*.

3. An *Inflation* of the *Lungs*, as the *Aſthma* of the *Stomach* in *Sleep*, as the *Incubus* of the *Uterus*, after *Hyſterical Fits*, of the *Penis* in a *Priapiſm*.

Many other Species of *Windineſs* are produced from too high a Fermentation, when the *Ructus* are *bitter*, *acrid*, or *fœtid*; or the *acrid Choler* ferments like contrary *Salts*, with the *ſharp Acid* of the digeſted Meat in the

the *Jejunum*, and there produces *Flatuosities*; or when some extraneous Ferment extraordinarily rarefies and putrefies our *Humours*; but these belong to that State of *Humours* which depends on too high a Digestion.

The external Causes of *Flatulency*, are,

I. Crude Meats which are hardly fermented and digested, as the *hard*, the *acerb*, *watery*, *oyly*, *viscous Styptic*, and too great a quantity of Meats; for these, by the strongest Ferment, will rarely attain a due Fermentation in the *Stomach*.

1. The *watery*, as *Broths*, and *Milk-Meats* are *windy* to *Stomachs* troubled with *acid* Ferments; and all *small Liquors* hinder their Digestion; and for these *Stomachs*, the more solid Diet of *Flesh-Meat* is best, and *small Ale*, and nothing of *Vegetables*, but well fermented *Breads*.

2. The *viscous Vegetables*, which contain a pungent *Salt* mixed with much *Mucilage*, as *Onyons*, *Leeks*, *Garlic*, *Radish*, *Turnip*, *Cabbage*; these have a *Mucilage* hard to be digested, and an *Acrimony* which rarefies it into *Wind*, and *Ructus*; and from hence we know all *windy Herbs*, by having an *Acrimony* lodged in a *Mucilage*.

3. All the *sweet* and *mucilaginous Legumina*, as *Beans*, *Peas*, are hardly digested, by reason of their *Sliminess* and *Sweetness*, apt to ferment.

Wines

Wines of the *ſweet* and *mucilaginous Fruits*, as *Figs*, *Raiſins*, *Grapes*, and other Fruits, and all the *Mault-Liquors* made of *Corn*, are full of a *vegetable Mucilage*, and contain alſo an *oyly*, *acid Spirit*, which is ſtopt from its due Fermentation by the *Slimineſs*, or outward Accidents, or for want of a due Ripeneſs in the Fruit it is made of; for this Reaſon, *Wines* made of our *acid* and *crude Engliſh* Fruits are very *windy*, the *airy*, *elaſtic Particles* ſeem to mix with the *oyly*, *acid Spirits* of all *Vegetable Liquors*; and when they are not thorowly fermented thoſe *elaſtic Particles* remain mixed with the *crude*, *ſlimy Liquor*, and create the *Windineſs* of it; or if any fermenting Liquor be ſhut up in Bottles before thoſe *elaſtic*, *airy Particles* have evaporated, which are obſerved to produce the Froth in all fermenting Liquors; they create a great windineſs in thoſe *bottled Liquors*, and they become very unhealthful to flatulent Bodies.

Sugar and *Honey* make *windy Liquors*, becauſe they are apt to ferment, and their *Spirits* are depreſſed, and the *airy*, *elaſtic*, *fermenting Particles* are detained by their innate *Gummoſity*.

4. *Oyls* and *Fats* are hardly digeſted, becauſe of the *Mucilage* they have joyned with them; ſo *Butter*, *Oyl*, and *fat Meat*, lie long in the *Stomach*, and are hardly turned into a

thin

thin Chyle; and for this reaſon *Cheſnuts*, and all *oyly Nuts*, are commonly thought *windy*.

5. All *crude Plants*, as *Spinage*, *Lettuce*, *Purſlain*, *Muſhrooms*, are *windy*, by reaſon of their *crude Mucilage*, and unaptneſs to be digeſted.

6. All *Acids*, and *acerb Fruits*, are *windy*, as being leſs apt to ferment, unleſs with contrary *Salts*.

Mr. *Boyl's Vacuum* proves all *Liquids* to be full of *airy Particles*, which riſe upon the pumping of the Air; but that *Acids* have the leaſt of it; and therefore I have obſerved *March-Drink* to have the leaſt *Windineſs*, and all other ripe Liquors.

7. All very *mucilaginous Fleſh-Meats*, as the *Extremities* of *Animals*, and *Fiſh*, and *Water-Fowl*, are accounted *windy*, by reaſon of their abundant *Slimineſs*.

II. All external Cauſes which hinder a juſt Fermentation, produce *Windineſs*, as *Idleneſs*, want of *due Exerciſe*, too much *Sleep*, *cold Air*, *Fear*, *Sadneſs*, too much *Evacuation* by *Venery*, *Baths*, *Exerciſe*, ſpend the *Spirits* too much, which help the Invigorating of the *ſtomachic* Ferment, and all *Evacuations* ſtopt in the *Hæmorrhoids* or *Menſes* vitiate the *ſtomachic* Ferment, by mixing the *Guts* with it; and in *Obſtructions* of the *Viſcera* are blown up continually.

The

The internal Cauſes of a *cold Flatulency*, are,

1. A *Stomachic* Ferment which wants *Spirits*, being only *ſowre*, or *mucilaginous*, *acerb*, or *auſtere*.

2. The *vapid*, *watery*, *mucilaginous* or *crude* State of *Blood* and *Humours*; for they who have a ſtrong Heat, or due Fermentation, have no *Flatulencies*, unleſs the Meat be of the qualities above-mentioned, which are unfit for Fermentation, and ſo cannot throughly be diſſolved by it, by reaſon of their unaptneſs to ferment.

They who have a very low Digeſtion have no *Windineſs*, becauſe they cannot raiſe the *Spirits* in the ſlimy Meat ſo far as to become *windy*; but thoſe only are flatulent who can digeſt to ſome degree, whereby the *Spirits* begin to ſeparate, but do not perfectly volatilize themſelves, and ſeparate the *aery Particles* from the *fermenting Liquor*, which, by its *Sliminеſs*, retains much of the *aery*, *elaſtic Particles*.

3. When the *Pylorus* is ſo obſtructed, that the *alimentary Tincture* does not deſcend to the *Guts*, it becomes *windy* in the *Stomach*.

4. When the *Choler* does not correct the *Acidities* of the *Aliments* digeſted, as in the *Jaundice*, *Flatuoſities* are produced.

5. In the Obſtruction of the *Viſcera*, the *Spleen-Juyce*, or the *Hepatic*, is mixt with the *animal Ferment* in the *Stomach*, and vitiates the *Digeſtion*; or the *conglobate Glands* ſend their *ſerous Lympha's* thither in *Catarrhs*, or the Obſtructions hinder the Diſtribution of the *Chyle*.

The Cure of *Flatulency* conſiſts,

1. In Evacuation of the *ſlimy Humour*, which burthens the *Stomach*, by *Vomits*, and *Purges*, and *Clyſters*, which are *Carminative* and *Phlegmagogues*.

2. By avoiding all noxious, windy *Meats* and *Drinks*, and uſing a contrary Diet to help Digeſtion, as thoſe above-mentioned, and all the *carminative Aromatics* added to it; as *Pepper*, *Ginger*, *Cloves*, *Nutmegs*; and by avoiding all *fulneſs* of *Diet*, and *Surfeits*, and to uſe a very ſimple Diet of *Fleſh-Meats*, *ſmall Ale*, and *Bread*, and no other; to avoid Suppers, and *Venery* after Meat, and much Exerciſe, and all ſorts of *Vegetables* in Diet, as *Legumens*, *Mault Drinks*, and *Sallets*.

3. The *pituitous*, *acerb* and *vapid* Temper of the *ſtomachic Ferment*, and of the *Blood*, muſt be corrected by *Digeſtives* above-mentioned; and the *Phlegmagogues* muſt evacuate it, as *Pilulæ Aloephanginæ*, &c.

4. The Matter rarefied into *Flatus* muſt be evacuated by *Pil. Maſtich. Aloephangin.* by *Clyſters* and *Vomits*.

5. The

5. The *Flatuoſities* muſt be diſcuſſed.

1. By ſweet *Aromatics*; as *Semen Ammeos* ℥ſs. boiled in *Wine*, or *Caraways*, *Cummin*, *Fenil*, *Aniſeed*, *Dill*, *Lovage*, *Parſly-Seeds*, infuſed in *Wine*, or *Eleoſacchara* of them; as, *Fenil. Ol. Gutt.* 6. in *Wine*, *Daucus-Seeds* in *Beer*, *Peptic Powders* of the *Seeds* mentioned, and *teſtaceous Powders*, *Roots* of *Angelica* in *Powder* or *Wine*, *Spirit* or *Tincture* of *Imperatoria*, *wild Parſnip-Seeds*, *Lovage-Roots*, boiled.

2. By the *acrid Aromatics*; as *Pepper*, whoſe *Tinct.* with *Brandy*, or *Spirit* of *Sal Armoniac.* or *Diatrion*, *Pipereon in rotulis*, *cum Sacch.* & *Ol. Feniculi*, *Cubebs*, *Cardamom* in *Spirit*, *Tincture* or *Wine*.

3. The *Laurel Aromatics*; as *Ol. Cinnam. Caryophill. cum Sacch. Forbiculi*, *addend. Ambr. Gryſ. Confect. è baccis Lauri* ℥ij. *ante paſtum*; *Orange* Peels and *Limons*, *Nutmegs*, *Winter-Bark* in *Tincture* or *Wine*, or *Bay-Berries* in *Wine*.

4. *Terebinthinate Aromatics*; as *Juniper-Berries* candied, No. X. or *Syrup* of the ſame made with *Wine*, or *Juniper-Wine*; *Enula* compound Candied.

5. *Acrid*, *ſweet Aromatics*: *Calamus Aromaticus*, *Ginger*, *Zedoary*, *Galanga*, which may be infuſed in *Wine* or *Brandy* thus, ℞ *Calami Aromatici*, *Zedoarii*, *Galangæ*, *Zinzib. an.* ℥ij. *Senæ* ℥vi. *Agarici*, *Turbethi*, *an.* ℥iij. *Cardamom*

℥i. *Fiat infuſ. in Vin. alb.* ℔ij. *colat. Capiat* ℥iij.

Let *Zedoary* be chewed in the *Mouth*, or infuſed in *Wine*.

Uſe *Coſtus* and *Iris* in *Wine* or *Tincture*.

6. *Cephalic, acrid, ſtyptic Aromatics*, and *bitteriſh*; as *Calaminth*, *Mint*, *Penny-Royal*, *Thyme*, *Roſemary* in *Wine*, or their *Oyls* in *Lozenges*, or *ſpec. Diacalaminth* in *Lozenges*.

7. *Bitters* deterge the *phlegmatic Matter* joyned with *Aromatics*; as *Wormwood-Wine* with *Sal volatile oleoſum*, or *Enula*, and *Orange* Peels, *Chamomil* Flowers two handfuls in a Bottle of *Sack*; bitter Wines of *Centaury*, *Gentian*, and *Orange* Peels.

Decoction of *Polium Montanum* in *Wine*, or *Conſerve* of *Tanſie*.

Theriaca, or *Mithridate* with *Wine*, *Syrup* of *Carduus* ℥iij. with ℈i. of Extract of *Calamus Aromaticus*.

8. *Fœtids*; as *Rheu* in *Wine*, or *Syrup*, or diſtilled, or in *Clyſters*; and outwardly, *Oyl* of *Rheu*, and *Amber*.

9. *Animal Fœtids*; as *Caſtor*, and the Dungs of *Animals*, as that of *Pigeons*, and *Hens*; or Infuſion of *Horſe-Dung*, and the ſame fryed in *Oyl*, applied outwardly.

10. *Vegetable Acrids*, or *Corroſives*; *Garlic*, and *Onyons*, and *Aaron* Roots.

11. *Terebinthinate Fœtids*; *Rad. Aſari*, *Nardi*, *Savin.* boiled in *Wine*, and applied as a *Cataplaſm*, and the *Wine* drank. 12.

12. *Narcotics:* R. *Aqua Fl. Cham.* ℥iv. *Menth. Mirabilis, an.* ℥iſs. *Spir. Nitri dulcis* ℥ſs. *Laud.* gr. ij. *Ol. Aniſ.* Gutt. 2. *Syr. Fœniculi* ℥i. *Miſce.*

The external Applications are Fomentations of *Aromatics* boiled in *Wine: Calamus, Zedoary, Galanga, Cyperus, Mace, Cinnamon.* Of *Bitters: Wormwood, Chamomil, Bay-Berries, Mint, Empl. de Baccis Lauri, de Cymino.*

Balſams: Ol. Nutmegs expreſſed ℥ſs. *Balſam. Peru* ℥ij.

Oyls: Chymical *Ol. Salviæ, Caryophill. Dill, Rheu, Amber.*

Bags of *Millet, Cummin, Aniſeed,* fryed with *Salt* and *Oats.*

Bread or *Flannels* dipt in *Brandy,* in which the *Aromatics* are infuſed.

Clyſters of *Sack,* and *carminative Oyls,* or ℥ij. of *Aqua Vitæ* added.

Or *Purgers* added, as *Benedict. Laxativ.* ℥i. *Infuſ. Croci Metall.* ℥iij. to a Carminative Decoction of *Calamint, Penny-Royal, Origanum, Fl. Chamomil,* and the Seeds, with *El. è Baccis Lauri* ℥iſs. Oyl of *Aniſeeds* ℈ſs. in the *Yolk* of an *Egg.*

A *Cake* may be fryed of *Yolks* of *Eggs,* and *Cummin Seeds,* and *Oyl* of *Chamomil.*

Aniſeeds, and *Chamomil Flowers,* infuſed in *Aqua Vitæ* for a Fomentation.

Cupping-Glaſſes applyed to the *Belly.*

Plaſter Tachamahac, *Caranna*, and *Plaſter* of *Bay-Berries* mixt in equal Parts.

A Pound of *Ginger* may be boiled in a Veſſel of *ſmall Ale*, for ordinary Drink.

In the Cure of *Flatuoſities* we muſt inſiſt chiefly on Digeſtives, which promote the Fermentation of *Humours*; the diſcuſſing the preſent *Flatuoſities*, and evacuating the *ſlimy Matter* cannot hinder the Production of *new Flatulencies*: but the Curing the *low Fermentation*, perfectly cures all *Flatulencies*; but thoſe which depend on the *Obſtruction*, and *Tumour* of the *Viſcera*, cannot be cured without a reſpect to theſe Diſtempers that occaſion the *Flatuoſity*. Such are the *Flatuoſities* in the *Tympany*.

And the Diſtempers of the *Nerves*, as *Hyſteric Fits*, and *Aſthma*, which produce *ſymptomatical Inflations* of the *Guts*, which cauſe *Windineſs*; and that is cured by removing the original Diſtemper.

The *Windineſs* appears much in all new fermented Liquors; and the further they are fermented or ripened, the leſs *windy* they are. The bottling Liquors ſtops their Fermentation; and therefore, ſuch Liquors are to be avoided in the *windy Cacochymia* of our *Chyle*.

If the Matter in which the *windy Spirits* are included be not well evacuated, the *Carminatives*

minatives occaſion a greater *Flatuoſity*, by rarefying the *Wind*. *Ginger* and hot *Sherry* I have obſerved very good in *Windineſs* of the *Stomach*, and *Cholics* thence produced.

Boiling any Liquor that is *windy* evaporates the *Spirits*, and the ſame *windy Spirits* may be diſcuſſed out of *Animal Humours* by Exerciſe or Bathing.

The drinking boiled or warmed Drink with *Steel*, may be convenient in the *Windineſs* of the *Stomach*.

The drinking the *Bath-Waters* waſhes off the *ſowre Tartar* from the *Stomach* and *Blood*; and bathing in thoſe *ſulphureous Waters* very much exalts the Fermentation of the *Chyle*, and higher digeſts the *Blood*; and upon theſe accounts, both inwardly and outwardly, it agrees with moſt caſes depending on a depreſſed Fermentation of *Humours*, but diſagrees with the contrary, which ariſe from too high a Fermentation of our *Humours*, eſpecially in their beginning, whilſt a high Fermentation laſts; and for this reaſon, Bathing diſ-agrees with hot *Bloods*, the *Hypochondriac*, *Hyſteric*, *Aſthmatic*, *Nephritic*, *Convulſive*.

Chap. VIII.

Of the Serous Cacochymia *of* Animal Humours.

When the *Chyle* is no way changed into the *Serum* of the *Blood*, but ſwims mixed with it, that is the loweſt ſtate of *Crudity* in the *Blood*; for the *Chyle* ought to be changed into the *Serum*, by the *Saltneſs* and *Oyline ſs* of the *Blood*, which abſorbing the *Acid* of the *Chyle*, it loſes its *Milkineſs*. The *Serum* and *Chyle* differ moſt by their *Colour* and *Conſiſtence*; for *Acid Spirit* of *Nitre* makes the *Serum Milky*, and *Spirit* of *Sal Armoniac.* makes it clear *Serum* again. We often obſerve the *Chyle* on the Cake of *Blood* in *milky Spots*, or mixed much with the *Serum* in *Cachectic* Perſons; and this is cured by *Chalybeates*, and *volatile Salts*, which turn it to *Serum*.

The next degree of *Crudity* in the Sanguification of our *Chyle*, is, when the *Serum* is not digeſted into a *gelatinous Lympha*, fit for the Nouriſhment of the *Solid Parts*; for the

viſcid

viſcid part of the *Serum*, which evidently contains the *caſeous* parts of the *Chyle*, as appears by its Inſpiſſation by the *Fire*, or Coagulation by *Alum*, or other *Acids*, is naturally changed, by a long Circulation and Separation of its *ſuperfluous Humidity*, by *Sweat* or *Urin*, into the *Lympha ſalſa ſeroſa*, which being expoſed to the cold Air, when it is taken out of the *lymphatics*, it preſently turns to a *Jelly*.

There may be a further degree of *Crudity* reckoned, when the *gelatinous ſalſa Lympha*, made out of the *Serum*, does not become *fibrous*, for want of a due *Viſcidity* or *Gumminеſs*; for then we believe *Humours* have attained their perfect Digeſtion, when there appears a *fibrous Hypoſtaſis* in the *Urin*, which depends upon the *viſcid* part of the *Serum* turned into the *fibrous Cake* of the *Blood*.

The *roſy* or *red oyly Particles* of the *Chyle* ought to become more *red* and *florid*, by a long Digeſtion, by their Mixture with the *Volatile Salt*, and *red Oyl* of the *Blood*; but in *Cachectic* Perſons we obſerve the *Cake* of *Blood* to be of a *pale*, *Pink* Colour, and leſs *florid*, like *Milk* and *Blood* mixed.

The *Acid* part of the *Chyle* ought to be digeſted into the *vitriolic Acid* of the *Blood*; but by reaſon of the *Crudity* of the *Blood*, it keeps

keeps its *tartareous* Nature, and hinders the Rarefaction of the *Blood*, and abates the *Volatility*, both of the *Volatile Salt*, and *Oyl* in the *Blood*.

The abundant *Aquoſity* of the *Serum* ought to have been evacuated by *Sweat* and *Urin*; but the *Chyle* being not fully digeſted, the *watery* part cannot eaſily be ſeparated from the *viſcid* contents; neither can it acquire its *Salt* Taſtes, which fits it for a Secretion by its proper *Glands*: hence it will inevitably follow, that the *Veins* and *Lymphatics* are greatly filled and diſtended by the abundance of the *Serum*, which produces divers Diſtempers in ſeveral parts.

I. If it ſtagnates in the habit of the *Body*, and is mixed with crude *Chyle*, which cannot circulate through the *Lymphatics*, it produces an *Anaſarca*.

II. If it ſtagnates in any particular Part, it produces external *Tumours* containing *Water*.

III. If it be evacuated into divers *Cavities*, it produces divers ſorts of *Dropſies*; as,

1. *Hydrops Aſcites*, when the *Serum* breaks the *Lymphatics*, and fills the *Cavities* of the *Belly*, either by Fulneſs of the *Serum*, or by the Diſtention of the *Veſſels*, which are compreſſed by the *Tumours* of the *Viſcera*.

2. The *Serum* may be evacuated into the *Cavity* of the *Head*, in the *Hydrocephalus*.

3. *Hy-*

3. *Hydrops Thoracis*, is when it is evacuated into the *Cavity* of the *Breaſt*.

4. In the *Dropſy* of the *Womb*, the *Water* is contained in the *Cavity* of it, or its *Teſticles*, or diſtends the *Lymphatics* into *Veſiculæ*.

5. In the *Hydrocele*, the *Water* is evacuated into the *Cods*.

Theſe Diſtempers depend on too great a *Seroſity* of the *Blood*; but they being Evacuations of it into particular *Cavities*, ought to be treated of under that head.

The external Cauſes of the *Seroſity* of the *Blood*, are,

I. A wet and a moiſt Region, which ſupplies great, foggy Air, for our Reſpirations; and by that we imbibe its *Humidities*, and that alſo hinders Tranſpiration, and ſo increaſes the *Seroſity*.

II. A *crude*, *watery*, *mucilaginous* Diet of *Vegetables*, *Fiſh*, immoderate *Drinking*, *Milk-Meats*, *Broths*, *Water* drinking, *Herbs*, and *Fruits*.

III. The Intermiſſion of dew *Exerciſe*, which ought to diſcuſs by *Sweat*; and that alſo helps *Chylification*, *Sanguification*, and the *Circulation*, and Secretion of *Humours*.

IV. The Suppreſſion of *Evacuations* by *Sweat* and *Urin* in the *Stone*, or the Suppreſſion of *Fontinels*, *Menſes*, *Hæmorrhoids*, or *Looſeneſs*, make the *Blood* more *ſerous*.

V. The

V. The *Sanguification* is weakened by great Evacuations, as *Hæmorrhagies*, *Dyſenteries*, *Fluxes* of the *Menſes*; as alſo, by the *Fluor Albus*, and *Vomitings*, and *Quartanes*.

VI. *Sadneſs* and *Sleep* ſtop the Motion of our *Spirits* and *Humours*, and by that means hinder our *Sanguification* of the *Chyle*.

The internal Cauſes of too much *Seroſity* of the *Blood*, are,

1. A *weak Ferment*, and a *watery Chyle*.

2. A *vapid*, *watery Blood*, which is leſs *florid* and *oyly*, and wants its due *Saltneſs*, by which it ought to turn the *new Chyle* into the *Serum*, and the *Cake* of *Blood*.

3. The *Circulation* of the *Blood* being hindred by any inward *Polypus*, or *Tumour* of the *Viſcera*, as the *Lungs*, *Liver*, *Spleen*, *Kidneys*, either cauſe an Extravaſation of the *Serum*, or hinder its Digeſtion and Sanguification, and the Stagnation of it is obſerved in ſome part.

The Circulation of the *Blood* is deficient in the *languid* and *dying*, and their *Legs* pit.

The Circulation being often ſtopt, occaſions that *Dropſies* follow, *Aſthma's*, *Hyſterical Fits*, and other *Convulſions*.

The Signs of a *ſerous Conſtitution*, and of the *ſerous Cacochymia*, are,

The Uſe of *watery Meats* and *Drinks*, Evacuations of *Sweat* or *Urin*, or any other ſtopt.

The

The *Swelling* of the *Belly*, *Legs*, or *Face*, under the *Eyes*, much *Sweating*, or great quantity of *pale Urin*, *watery Stools*, and much *Water* contained in the *Blood*, when let forth, above an equal weight of the *Serum*, in reſpect of the *Cake*.

The Cure of the *ſerous Cacochymia* requires,

Firſt, A *dry Diet*, and that which is *heating*, drinking *Wine*, or *ſtrong Beer*, *Roaſt* rather than *Boiled*, all manner of *ſalt*, *bitter*, *acrid* or *aromatic Pickles*, and abſtinence from much *Liquids*, only ℔iſs of *Wine* in a Day, for 40 Days, or elſe with *Wormwood*, *Juniper-Berries*, *Anti-ſcorbutics*, and *Aſhes* in conſtant Drink.

Secondly, The Evacuation of the *Chyle*, which is *watery*, from the *primæ viæ*, *Blood*, or *Cavities* of the *Body*.

1. By *Purgers*, which, by their *Tithymaline Acrimony*, carry off the *Water*; as *Extract. Eſulæ*, *Pil. De Gambogia. Turbeth.*

2. Or by *Purgers* which have an *acrid Reſin*; as *Jalap*, *Mechoacan*, *Scammony*, with *Merc. dulcis.*

3. Or by *nauſeous Bitters*; as *Syrup. de Spina*, *Roots* and *Seeds* of *Dwarf Elder*, *Juyce* of *Briony*, *Solanum Lignoſum*, *Soldanella*, *Troches* of *Alhandal*, *Elaterium*, *Extract* of *Hellebor.*

Or

Or by other gentler *Acrids*; as *Juyce* of *Iris*.

Or *Vitriolic Minerals*; as *Cryſtals* of *Silver*, *Squamæ Æris*, *Antimonials*, Infuſion of *Crocus Metallorum*, *Mercurius Vitæ*, *Turbeth. Mineral.* and theſe work by *Vomit*, and evacuate the *Serum* both ways.

Thirdly, The *Serum* muſt be evacuated out of the *Cavities* by *Paracenteſis*, unleſs the *Dropſie* depend on a *Schirrus* of the *Viſcera*, for that is incurable.

The Parts may be pricked with a Needle above the Knee, and *Eſcarotics* applied of *Aſh-Aſhes*, or *Blyſtering Plaſter*.

Fourthly, The *ſerous Matter* is moſt plentifully evacuated by *Urin*.

1. By *Lixiviums* of *Broom*, *Juniper*, *Bean-Aſhes* infuſed in *White-Wine*, with *Orange* and *Limon* Peels, or *Flints* extinguiſhed in *Wine*.

2. By *Salſo-Acids*, *Tart. Vitriol. Sal Armoniac.* or *Salt* of *Wormwood*, and *Spirit* of *Salt* diſſolved in any *diuretic. Julep.*

Sal. Succini, *Sal. Prunell.* or *Salt* of *Tartar* nitrated, the Herb *Kali* half a dram three Mornings ſucceſſively.

3. By *acrid* and *cauſtic Turpentines*, *Juniper-Berries*.

Golden

Golden Rod, *Conyza* Roots, *Enula Campane*, *Squinanth.*
Asarabacca Roots, *Spikenard.*
Leaves of *Arse-smart.*
Savin, or *Pine*-Leaves.
Hepatica Terrestris.

4. By *watery Caustics.*
Ranunculus Hederaceus, *Aaron* Roots.
Anagallis Mas, *Ros Solis.*
Squills, *Garlic*, *Acrids*; as *Garlic* infused in *Ale*, or its *Juyce* in *Broths* or *Onions*, or *Leeks* in the same, or *Nettle* Roots, which have a *caustic Juyce* in them.

5. By *Cresse Acrids.*
Infusion of *Mustard-Seed* in *Wine*, *Spirit* of *Scurvy-Grass*, and the *Leaves* of *Scurvy-Grass*, *Juyces* of *Water-Cresses.*

6. By *aromatic*, *sweet Acrids*; as,
Daucus, *Parsley*, *Fenil*, *Dill-Seeds*, distilled *Water* from *Water Parsnip*, Roots of long *Fenil*, *Smallage*, *Parsley*, *Chervil.*

7. By the *smoaky*, *bitter Acrids*; as,
Eryngo, *Scabious*, *Carduus*, Roots of *Burdock*, and the Seeds.

8. By the *aromatic*, *bitterish Acrids*; as,
Penny-Royal, *Hyssop*, *Rosemary*, *Sage.*

9. By the *acrid Legumens*; as,
Asparagus, and *Butchers Broom*-Roots, *Periclymenum Flowers*, *Broom.*

10. By the *acrid Fœtids*; as,

Rheu,

Rheu, *Crocus*.

Rheu boiled in *White-Wine*, *Posset-Drinks*, help the *Tympanitical* to make *Water* plentifully.

11. By the *bitter Acrids* of a *wormwood* Taste; as,

Sea, and common *Wormwood*.

12. By the *acrid Bitters* of a *Mather* Taste; as,

Radix Rubiæ.

13. By *Acrids* of a *laurel* Taste; as,

Bay-Berries, *Ash*-Seeds, tops of *Holly*, and *Ivy-Berries*.

14. By *acrid Insects*; as,

Millepedes, *Earth-Worms*, *Scarabæi*, *Grashoppers*.

15. By *burning Acrids* of the *Orris* kind; as,

Xyry, *Acorus*.

16. By the *bitter Acrids*; as,

Grana Alkakengi, *Bacc. Fraxini*, *Bubulæ*.

17. By *volatile Salts*, and *chymical*, *acrid Oyls* of *Vegetables*, or *Bitumens*.

18. By *Acid Minerals*, *Spirit* of *Salt*, *Oyl* of *Vitriol*.

By *acid Vegetables*, *Juyce* of *Limons*, *Cream* of *Tartar*. *Vinegar* helps the *Thirst*.

19. By the *lamium Fœtids*; as,

Hedera Terrestris.

20. By

20. By the *ſtrong Bitters*; *Salvia Agreſtis*, *Lupulus*, *Scordium*, *Chamædrys*, *Marrubium*, *Vervein.*

21. By the *ſweet, nauſeous Bitters*; as, *Centaury*, *Trifolium Paluſtre*, *Gentian.*

Fifthly, The *Serum* may be evacuated by *Clyſters*; as,

1. *Urinous.*

2. *Terebinthinate.*

3. Of the *biteſt Purgers*; as *Coloquintida.*

4. By *Sulphurous Medicines*; as Infuſion of *Crocus Metallorum.*

5. By *Tithymaline Acrids* added; as *Gambogia* 3ſs. diſſolved in *Sack.*

Sixthly, A *ſweating* Diet of *Guaiacum*; and with that he may dilute his Wine for ordinary Drink. *Baths*, or *Fomentations*, or the frequent Uſe of *Venice Treacle*, diſcuſs by *Sweat*; and the *Balſamum Polychreſtum.*

Seventhly, All *Hydropical Tumours* may be diſcuſſed by *Baths*, *Fomentations*, *Cataplaſms*, *Ointments*, *Plaſters.*

1. By the *acrid*, *fœtid*, and *aromatic* Plants above-mentioned, being boiled in *ſalt Liquors*; as *Sea-Water*, a *Lixivium* of *Aſhes*, or *Aqua Calcis.*

2. By the *Stercora* of *Animals* boiled in *Wine*, *Urin*, or a *Lixivium*, and *Sulphur* added to them.

3. By *Purging Unguents*; *Ung. Agrippæ*, *Arthanitæ*, *Oyntments* of *Elder Bark*, and *Dwarf Elder*. By *Oyntment* of *Birch-Bark* and *Leaves*.

4. By *Cauſtic* Plants, or *Animals* boiled in *Oyl*; as *Oyl* of *Scorpions*, *Oyl* of *Flammula*.

5. *Cataplaſms* of *Roots* of *Wild Cucumbers*.

Indication requires the higher Fermentation of the *Mucilaginous Chyle*, by the Taſtes mentioned in the Cure of a *low Fermentation*; but theſe more ſpecifically reſpect the *Seroſities*, and cauſe its Sanguification.

Firſt, All ſorts of *Bitters*.

I. The *nauſeous Bitters*, or *Lychnis Bitters*; as *Centaury*, *Buck-Bean*, *Saponaria*.

II. The *Mather Bitters*; as *Rubia*, *Celandine*.

III. The *Wormwood Bitters*.

IV. The *ſmoaky Bitters*; as *Carduus*.

V. The *Turpentine Bitters*; as *Enula*, *Eupatorium*.

VI. *Lamium Bitters*; as *Chamædrys*, *Marrubium*, *Scorodaria*.

VII. The *Pea Bitters*; as *Broom*.

VIII. The *Laurel Bitters*; as *Aſh*, and *Birch*, *Bark*, and *Seeds*.

IX.

IX. *Bitter Gums*; as *Aloes*, *Myrrh*, *Ammoniacum*.

1. Theſe *Bitters* ſupply the want of the *bitter Acrid* of *Choler*, neceſſary for Digeſtion and Sanguification of the *Chyle*.

2. All *acrid* and *cauſtic* Plants make the *Blood* more *florid*, and ſo we find them to help Sanguification.

3. All *Salt* Taſtes, volatile and fixed, make the *Blood* more *florid*; they ſupply the want of an *Animal Salt*, which, by abſorbing *Acids*, turns the *Chyle* into *Blood*, and promotes the Mixture and Sanguification of both.

4. *Teſtaceous Medicines*, the Calces of *Minerals*, and Aſhes of *Animals*, by abſorbing the *Acidities* of *Chyle*, help the Mixture of it, and the *Blood*.

5. *Oyly*, *acrid*, and *reſinous* or *oyly* Plants, exagitate the *red* Part of the *Blood*, and ſupply its defect; as all *Aromatics*, and *aromatic Wines*, and *volatile*, *oyly Salts*.

6. *Mineral Sulphurs* raiſe the *oyly*, *red* Part of the *Blood*; as *Chalybeats*, *Antimonials*, *Cinnabarines*.

I tryed the *ſalt*, *clear*, *limpid Water*, taken out of the *Belly* of an *Hydropical* Perſon by *Tapping*, and could neither inſpiſſate it by *Fire*, nor coagulate it by *Vitriol* or *Alum*. This was the *crude*, *lymphatic Liquor*, too *ſerous* and *crude*; the *Spleen* was *Schirrous* after a *Quar-*

tain: This *Lympha* ſometimes appeared *milky*.

Though all the *Serum* be evacuated by *Purgers*, *Diuretics* or *Bliſters* on the *Legs*; yet it will regenerate, if the Digeſtion of *Humours* be not raiſed, and the *Schirroſities* cured which cauſed its Evacuation into the *Cavities*, and the breach of the *Lymphatics* ſtopt, which ſeems impoſſible.

An *Hydropical* Gentlewoman was *Tapped* once a Week, for fourteen Weeks, and lived in a tolerable State for ſome time longer, by the help of five Grains of *Laudanum* every Night. No *Diuretic* cauſed *Water*; but *Wine* and *Water* helped that moſt, and allayed the *hectical Symptoms*. Every time after *Tapping* more *Water* was made by *Urin*; but the *Belly* filled with the *Serum* in a Weeks time, and a Gallon or two was taken out every Week; but, at length, the *Belly* did not fill much, but ſank, and a *Plaſter* laid on helped its *Tumour*; and a *Conſumption*, at laſt, moſt afflicted the Perſon who was before ſo *Hydropical*.

I have obſerved that *Fomentation* after *Tapping* abates the *hardneſs* of the *Belly* and *Viſcera*.

CHAP.

CHAP. IX.

Of the Fermentation of the Humours *into degrees above their Natural State.*

WHEN the Fermentation in the *Stomach* is carried too high, the *Contents* of the *Stomach* become *bitter* or *rancid*, very *acid*, *acrid*, or *ſalt*; and ſo are all the *Humours* thence produced.

By a ſtrong Fermentation all the Parts of the *Chyle* acquire an *Acrimony*; The *oyly* Part becomes *rancid* and *bitter*, and *ſtinks*; the *acid Tartar*, being volatilized, becomes *corroſive*, or *acid-acrid*; the *earthy* Part neither adhering to the *acid* nor *oyly* Part, is left in the *primæ viæ*, to go off by *Stool*; and the *Mucilage* of the *Meat* being attenuated by a high Digeſtion or Putrefaction, the *Chyle* becomes more *thin*, and *fluid*, and *nidorous Ructus* frequently riſe from the *Stomach*.

Not only the *Chyle*, but the *Blood* alſo is vitiated by too high a ſtate of the Principles of the *Chyle*, and from the Volatility of the *Oyl*, and the Pungency of the *Acid*, the *Blood* is made more *florid*, and the *Vitriolic Acid* more *ſharp* or *corroſive*, like the *Spirit* of *Acid Juyces* high fermented. A *roſy Chyle* will make a *florid Blood*, and an *acrid*, *bitter*, *ſalt*, *acid Chyle* will give the ſame quality to the *Blood*, and a *putrid*, *thin Chyle* will make a *putrid Blood*.

All the Diſeaſes depending on this State of *Humours*, are, the hot Conſtitutions of *Humours*, and are contrary to the former deſcribed; which are the ſeveral Species of cold Conſtitutions; *Fat* to the Mucilage of *Humours*; a putrefied thin Conſiſtence is contrary; and to the *Acerbity*, a *vitriolic Acidity* and *Saltneſs*; and to the *Seroſity*, an *Inſpiſſation* or *Viſcidity*; and to a *crude Flatulency*, a *rancid Flatuoſity*, and *nervine*, *wandering Pains*.

When the *oyly*, *acid*, *earthy* or *viſcid* Principles of *Chyle* acquire too high a State by Fermentation, they produce theſe ſeveral Species of *hot Cacochymia's*.

1. A *Bitterneſs* of the *Chyle* and *Humours* in *Choleric Conſtitutions*.

2. The *Chyle* and *Blood* in the *hot Scurvy* have a *rancid*, *oyly* State.

3. A

3. A Viſcidity of the *Serum*, or Inſpiſſation of the *new Chyle* mixed with it, as in *Inflammations* and *Rheumatiſms*.

4. A *Saltneſs* of *Blood*.

5. A *Vitriolic Acidity*, or *Corroſiveneſs* of *Blood*.

6. A *Putrefaction* of *Blood*, which cauſes its want of *Fibers*, or *Thinneſs*, or *Fluidity*.

7. A *Nidorous Ructus* from the *Stomach*, and a *hot*, *nervine Flatuoſity*, with *convulſive Pains*, or *hypochondriac* or *hyſteric Symptoms*, and a *feveriſh* Temper of *Blood*.

The evident Cauſes of too high a Digeſtion, are,

I. A *Hot Diet*, which digeſts and ferments too quick; ſo *acrid*, *aromatic*, *vinous*, *Salt*, and very *ſweet Meats*, produce an *acrid*, *aromatic*, *ſalt*, *vinous Chyle*; and *Honey* and *Sugar*, and *ſweet Wines*, are apt to ferment too much. All *Fleſh-Meats* high *ſalted*, *peppered*, or *pickled*, *fryed*, *broyled*, or *baked Meats*, breed a *Chyle* too *rancid* or *hot*. Fiſh, as *Salmon*, or *Crabs*, *Lobſters*, are apt to *Surfeit*, and putrefie in the *Stomach*. All *Meats* a little putrid before they be eaten exalt the Fermentation too much. All *Gravies*, *Anchovies*, *Oyſters*, and the *Indian Sawces*, are too great Stimulaters of a Fermentation in the *Stomach*, and all thoſe *Meats* which contain an *Animal* Ferment in them, as *old Cheeſe*.

II. By immoderate *Labour*, by the *Heat* of the *Seaſon*, or the Countries nearer to the *Sun*; by *Cares*, *Watchings*, *Anger*, *Joy*, *Pain*, the *Blood* is heated, and its Circulation quickened, and Sanguification is much promoted.

III. The ſame Cauſes produce a *bitter*, *acrid Bile*, which promote *Digeſtion* much, and *Sanguification* alſo. *Faſting* ſharpens the *Choler*; and thoſe who are apt to *Vomit Yellow Choler*, and thoſe who digeſt too faſt, have *Choleric Fluxes*. In Young Men, and hot Seaſons, *Choler* much abounds.

IV. The Retention of *ſalt*, *fætid Serum*, for want of Evacuation by *Sweat* or *Urin*, produces *Feveriſh* Diſpoſitions, which cauſe a high Fermentation in the *Blood*.

The internal Cauſes of too high a Fermentation, are,

1. A *ſpirituous*, *fætid*, *ſub-Acid* or *ſalt* Ferment in the *Stomach*, and this ferments too much all our Aliments.

2. A *natural oyly*, *acid*, *fætid*, or *acrid*, *ſalt* Temper of the *Blood*, which is apt to ferment too much.

3. A *bitter*, *acrid Choler*, which, with the Tartar of the Meat, produces a great *Saltneſs* of the *Blood*.

4. A *frequent* and *impetuous Circulation* of the *Blood*, which raiſes the Digeſtion of it, which

which happens often in Summer, and to Young Men, by *Paſſions* or *Surfeits*.

5. *Fætid Humours* retained ferment the *Humours*; as, the *ſalt Serum*, the *Semen*, the *Choler*, and many extraneous Ferments come into the *Blood* from without, as in the *Itch*, *Leproſie*, *Pox*, the Ferment of *infectious Fevers*, or the Poyſons from *Mad-Animals*, or venomous Bites of them: All which have their Effects on the *Animal*, by Fermenting its *Humours*.

Such as the *Blood* and *Spirits* of *Animals* be, as to their Qualities, ſuch is the Temper of their *Stomachic* Ferment, for that riſes from the other; and any Errour committed in *Chylification* is communicated to the *Blood* and *Spirits*.

The Cure of too high a Fermentation requires,

Firſt, That all the Evident Cauſes be avoided, and that we uſe a contrary Diet of *crude*, *acerb*, *watery*, *mucilaginous Styptics*; as *crude Vegetables*, *Biſtort*, *Lettuce*, *Spinage*, *Cucumbers*, *Sorrel*, *Melons*; Fruits; as *Apples*, *Plumbs*, *Cherries*, *Strawberries*, *Sloes*; the *Legumens*, as young *Peas*, *Beans*, boiled *Wheat*; and all the farinaceous Meats of *Oat* or *Barley Meal*, *Rice*, or *Pudding*, *Panados*.

The

The Drink ought to be *ſmall Beer*, or *Water* two Parts, with a little *Wine*; or elſe the Drinking *Mead*, *Elder-Wine*, or *Wood-Drinks*, or *Water* it ſelf, or *thin Milk*. *Milk-Meats* are very uſeful in this State, for we add *Milk* to fermenting *Wines* to ſtop their Fretting.

Secondly, All *Choleric Humours* ought to be evacuated, and the *Rancid Contents* of the *Stomach*.

I. By *Vomiting*, with *Carduus*, or *Sal Vitrioli*, or *Squills*.

II. By *Cholagogues*, and thoſe,

1. *Nauſeous Dock-Bitters*; as Chewing of *Rhubarb*, or its Infuſion with *Manna* by *Dock-Beer*.
2. By *Aloetics*; *Elixir Proprietatis cum Acido*.
3. By *Bitteriſh* and *Nauſeous Pea-Taſtes*; as *Sena*.

III. By the *Bitteriſh*, *Purging Waters*.

IV. By *Diagrydiates* mixt with *Tartar*, or ſome *Acid*, *Rhubarb Pouder*, by *Pil. Tartareæ*.

V. By *Lenitive*, *Sweet Purgers*; as *Manna*, *El. Lenitiv.*

Thirdly, The *oyly*, *bilious* or *ſalt* Temper of the *Ferment* and *Blood*, and its frequent Circulation, are to be corrected and checked, 1. By

1. By *Acids*; as *Spirit* of *Salt*, *Vinegar*, *Sulphur*, *Niter*, *Alum*, *Conſerve of Roſes*, vitriolated *cum Tinct. Roſar.* which coagulate the *Chyle*, the *Bile*, the *Salt Serum*, and the *oyly Particles* of the *Blood*, and thereby fix them. *Bitters* are always corrected by *Acids*, ſo the *Bitter* of *Aloes*, *Coloquintida* is abated by *Spirit* of *Sulphur*, or *Vitriol*.

2. *Styptics* preſerve the Conſiſtence of the *Blood*, and hinder or cure *Fevers*; as *Plantain*, *Houſe-Leek*, *Tormentil*, *Cinquefoil*, *Purſlain*.

3. The *Mucilaginous* incraſſate or thicken the *Conſiſtence*; as *Gum Tragacanth*, and *Ichthyocolla*; *Borrage*, *Bugloſs*, *Emulſions*, *Lettuce*.

4. *Watery Liquors* temper and dilute *hot Humours*; as *Mineral Waters*, *Whey*, with *Syrup* of *Violets*, and *cool*, *bitteriſh*, *ſlimy* or *acid Juyces*, *Milk-Waters*, drinking *Milk* and *Water*.

5. *Bitteriſh*, *Crude Plants* deterge away the *Choler*; as the *Cichory Bitters*, as Decoction of *Cichory-Roots*, or *Dandelion* in *Whey*, with *Cream* of *Tartar*.

6. *Opiates* ſtop the vapid Circulation of *Blood*.

7. *Mercurial Medicines* depreſs the Fermentation and *cool Humours*, and ſtop *Putrefaction*.

Fourthly,

Fourthly, Frequent *Bleeding* abates the Fulneſs of *Humours*, and checks their Fermentations, or *Fervors*, or *Ebullitions*.

Fifthly, All Evacuations ſuppreſſed ought to be renewed, and all extraneous Ferments to be corrected or evacuated.

Sixthly, Externally we may check the Ebullition of the *Blood*, by applying *Water* and *Vinegar* to the *Pulſes*, *Stones*, *Forehead*, *Feet*, and in an extraordinary Caſe the Patient ought to be put into cold Water, or dipt, according to the Method communicated to me by my Ingenious Friend Dr. *Baynard*, a Member of the *College* of *Phyſicians*; whoſe Succeſs by it in Curing ſuch Diſeaſes as depend on too high a Fermentation of the *Blood*, is very well known; and the Practice ſeems to me very Rational, if managed according to the Rules his Experience has found out.

The Diſeaſes which chiefly affect the *Stomach* upon too high a Fermentation, are, an *Oylineſs* and *Rancidity* of its *Contents*, and a *Nidorous Ructus*; The Cauſes of theſe are,

1. A *Salſo-acid*, *ſpirituous* Ferment.

2. *Meats* which are half *putrid*, or *oyly*, or *rancid*, or *fat*, or fryed with *Fat*, and *corroſive*

corroſive Vegetables; as *Garlic*, *Onyons*, or the much Uſe of *Tobacco*.

3. *Choleric* or *Salt Humours* mixed with the natural Ferment.

Since theſe *Nidorous Ructus* depend on the *Acrimony* of *Humours*, and the *Fœtid Spirituoſity* of the *Ferment*, and the *Putridneſs* of the *Meat*, they are improperly imputed to a *Crudity*; for a *Fœtor* is rather a ſign of a *Putrefaction*, and in no *Crudity* are the *oyly*, *acid Spirits* ſo far volatilized in the *Stomach*.

The Cure of this *Nidoroſity*, is,

1. By *Evacuation*, by *Vomiting* and *Purging*, as is directed.

2. By Correcting the *Oleous* Temper of the *Bile*, or *Ferment*, or *Meat*, by the *Acids* mentioned, as *Cream* of *Tartar*, *Juyce* of *Limon*, Decoction of *Tamarind*, *Spirit* of *Niter* dulcified, with *Spirit* of *Mint* or *Aniſeeds*.

Or by *Salſo-Acids*; as *Sal Prunellæ*.

3. By *Externals*, *Styptics*, *Aromatics*, and *Acids*; as *Quinces* and *Mint*, with *Vinegar* and *Leaven*.

By too great a Fermentation of the *Meat*, the *Lacteal Lympha*, as the *Saliva*, becomes nauſeouſly *Sweet* and *Sharp*, and the *Ferment* of the *Stomach* of the ſame quality, which produces a *Nauſeouſneſs*; and by

by its *Salso-Acid*, a *hot Cholic*. The *Mucus* of the *Larynx* and *Aspera Arteria* becomes *Sharp*, or *Salso-Acid*, and produces *Coughs*.

The *Milk* in the *Breasts* becomes *bitter*, *rank*, *oyly*, *salt*, *thick*, which gives *Gripes* to Children, and Vomits them.

The *Semen* becomes *salt* and *stimulating*; as in *Furor Uterinus*.

The *Succus Nervosus salt*, or more *lucid* than ordinary; as in *Deliriums*, and more *Oyly* and *Fœtid*.

The *Salt Lympha* becomes more *Salt*; as in the *Gout*, *Stone*, *Hæmorrhagies*, and the *Scurvy*.

Those are most dispos'd to this State of *Blood*, who are of *Choleric*, *hot Constitutions*; for the same kind of Diet produces much *Choler*, which over-ferments the *Blood*; as all *acrid*, *bitter*, *salt*, *aromatic* and *sweet* things, and all hot *Meats* and *Medicines* injure them, but cool ones, and those that are *Serous*, refresh them. The *Choleric* have their Senses and Actions of the Mind, and Motions of the Body, very quick and ready, their Passions of Anger and Revenge violent, and their Dreams cruel, and little Sleep, and their Pulse full and hard, and all these Symptoms depend on *Fiery* or *Choleric*, *Hot Spirits*.

The

The Abundance of *Choler* abates the *Appetite*, creates *Thirſt*, and requires a *cool-Diet*, and diſpoſes to *Fevers*, and *Phrenſies*. The *Eryſipelas*, and *Choleric Vomitings*, and *Looſeneſſes*, and a *bitterneſs* in the *Mouth*, the *Urin* is *thin*, *yellowiſh*, or *flame* Coloured, or *red*.

The *Habit* of the *Body* is generally *lean*, and the *Colour* of the *Face yellowiſh*, and the *Hair yellow* or *black*.

By theſe Signs mentioned we may know when *Humours* are too high fermented, and *Choler* produced: but that the Nature of *Choler* may be more fully explained, and the Cure of its *Bitterneſs* by Coagulations, I will annex the enſuing Diſcourſe about its Nature, Uſe, and Colours, and its Coagulations by *Acids*.

Choler may be compared to the *Juyces* of *bitter Plants*, for their *Bitterneſs* depends on an *Oyl* and *Acid*, mixed with much *Earth*, digeſted into a particular State, and by the Mixture of theſe Principles they acquire the Texture of Particles, neceſſary to a *bitter* Taſte.

There is a good quantity of *Water* mixt with *Choler*, whoſe Superfluity is drawn off by the *Lymphatics*, that the *Choler* might be left more *ropy*. Some of the *bitterneſs* goes off with the *Lympha*, which gives a

bitterneſs

bitterneſs to it, if it be taſted in the Veſſels, which return the *Lympha* from the *Veſica Bilaria*; and becauſe this meets the *Chyle* in the common Receptacle, it certainly helps there its Sanguification, which the *Ancients*, by Miſtake, imputed to the *Liver* its ſelf, but that is more rationally aſcribed to *Choler*, which is produced by the *Liver*.

The *Principles* of *Choler* are eaſily mixed with *watery Liquors*, and diluted by them. When it is too *ſlimy* or *hot*, we uſe much *Whey* or *Water* for that end to dilute it.

A great quantity of an *Earthy Principle* appears in *Choler*, becauſe it is apt to breed *Stones*, and it leaves a great *Thickneſs* or *Craſſamentum* upon Evaporation.

The *Oylineſs* in *Choler* appears in its *ropy Slimineſs*, and for this reaſon it ſerves *Painters* to mix (like *Oyl*) with their Colours; and it is uſed for the Waſhing of Cloaths, becauſe of its *Oyly* Parts. I have obſerved in *Faulcons* a ſmall quantity of *Gall* in the *bladder* of *Gall*, the *Oleous* Parts of *Chyle* being ſpent moſt on the *Fat*, and not digeſted ſo high, as to produce *Choler*; and the reaſon that *fat* Conſtitutions are more cool than the *lean*, is, becauſe they breed leſs *Choler*.

Spirit of *Harts-Horn* put into the *yellow Choler* of a *Hog* precipitated it a little, from

from whence, I ſuppoſed ſome *Acid* might be in it.

There is naturally no *Volatile Salt* in *Choler*, but that is made by Fermentation of it, or by a ſtrong Fire in Diſtillation. This ought much to diſcourage *Phyſicians* from confiding in *Chymiſtry* for the Explaining the Nature and Principles of *Animal Humours*, ſince it produces ſo much of a *Volatile Salt*, which is not naturally in *Choler*; and I think I have a much clearer and certain Notion of *Choler*, and its Uſe, from its *Senſible Qualities*, eſpecially its Taſte.

The *Green Choler* of a *Cow* taſted *ſweet*, *bitter*, *ſub-acrid*, or a little *pungent*, and it turned *Syrup* of *Violets green*.

The *yellow Choler* of a *Hog* had the ſame, but a ſtronger Taſte, and it turned *Syrup* of *Violets green*.

The *florid* Part of the *Blood* is that which the Ancient Authors meant by the *Bilis Alimentaria*, or *natural Choler*; for the *florid* Part being of an *Oyly* and *Acid* Nature, it is the immediate *Matter* of *Choler*; but the great *Slime* obſervable in *Choler*, is ſent to the *Liver* by the *Spleen*.

All *Choleric* Perſons have very *florid Bloods*, and that very *hot*, which both depend on the *oyly*, *acid*, *red* Part of the *Blood*.

Choler is eaſily mixed with *Blood*, if they be ſtirred together, and ſo gives a very *florid* Colour to it, which ſhews a great Agreement betwixt the *Red* and *Yellow* in *Animal Humours*.

The change of the *red*, *oyly Acid* in *Blood*, to a *yellow* Colour in *Choler*, is from a further Digeſtion of the ſame *Humour*, or a Mixture of a *Spleen Acid* with it; ſo *Brimſtone*, in its Natural State, is mixed with much *Acid* and *Earth*, and is of a *greeniſh* Colour; but when ſublimed, it has leſs *Earth* and *Acid*, and then is of a *yellow* Colour; but if the *yellow* Flames be melted with *Salt* of *Tartar*, the *Hepar Sulphuris* is *red*, and the *Balſam* made of it, or its *Tincture*; but if a *Lixivium* be made of the *Hepar*, and it be precipitated by a good quantity of *Acid*, it becomes *Milky*, as in *Lac Sulphuris*.

The *Oyl* in *Animal Humours* gives us as great a Variety of Colour, according to its different kinds or quantities of *Acid* mixed with it, as *Sulphur* does in the Experiments mentioned, or in the Variety of the Colours of Metals, which depends on their different Digeſtions, or Mixtures of their *Sulphur* with a *Mineral Acidity*.

I. The *Oyl* or *Butter* in *Chyle* gives a *Milky* Colour, by the Mixture of it with a *Tartar*

Tartar Acid, and reſembles the Colour and Mixture of *Lac Sulphuris*.

II. The *Oyl* gives a *florid* Colour to the *Blood*, by its Mixture with the volatilized *Vitriolic Acidity* and *Saltneſs* there, and this reſembles the *Hepar Sulphuris* in Colour and Mixture of leſs *Acidity*, with a *Saltneſs*.

III. The *Oyl* in the *Choler* is of different Colours, according to the difference of its *Spleen Acid* mixt with it, or the *Acid* of the Meats digeſted in the *Stomach*.

1. It is *Green* in *Sheep*, *Hens*, *Rabbits*, *Cows*, *Dear*, who feed on *Herbs*, which ſupply a great quantity of *crude* or *acerb Tartar* to the *Animal Humours*. If we drop *Spirit* of *Nitre* into *yellow Choler*, it turns it *Greeniſh*, and our Excrements look *Green* from *Chalybeate Water*, in which there is the *Acid* of *Sulphur* joyned with a *Styptiſity*. All our *Green Vomits* in Women are from a Mixture of *Yellow Choler*, and an *Acid* in the *Stomach*; they taſte and ſmell *Sowre*: They are cured by the groſſeſt *Steel* in *Hyſterical* Women, or *Teſtaceous* Medicines in Children, when they are griped by a *Green Humour*; from which Obſervations it appears, that the *Bilis Porracea* is from a *crude Tartar Acid* mixed with *Yellow Choler* in the *Stomachs* of the *Hyſterical*,

or *Hypochondriacal*, or Children *Griped* by that *Humour*; and the *Green Choler* of the *Animals* above-mentioned is, from the *red florid* Parts of the *Blood*, too much fixed by a *crude Acid*, and much of *Earth*, which thoſe *Animals* have from their Food of *crude Graſs*.

Theſe *Animals* have a milder Heat than thoſe who have *Yellow Choler*; the lowneſs of their Fermentation may be diſcerned by a leſs offenſive *Fœtor* of their *Bodies*, and the *watery Paleneſs* of their *Urins* in a natural State: From hence we may obſerve, that all *Green Humours* are ſigns of *Indigeſtion*, and a *crude Acidity*, and they are to be cured as the *Tartar Acid* of *Chyle*, already deſcribed.

2. The *Paleneſs* of *Choler* is from a great *Seroſity* mixed with it; and this is a ſign of a great *Weakneſs* of *Digeſtion*, and a *Serous Cacochymia*.

3. The *Slimineſs* and *Sweetneſs* of *Choler* is from a *weak*, *pituitous Blood*, and a ſign of it, and belongs to *Fat Conſtitutions*.

IV. In *Animals*, whoſe *Heat* is very ſtrong, and their *Fermentation* more violent, and whoſe *Bodies* have a ſtronger *Fœtor*, as *Men*, *Pigs*, *Cats*, *Dogs*, &c. the *Choler* is of a *Yellow* Colour.

V. The

V. The *Bilis Vitellina* differs from the *Yellow Choler* only in *Conſiſtence* and *Acrimony*; it is compared to the *Yolks* of *Eggs*, and is a ſign of a *viſcid* State of *Blood*.

VI. The *Blue Choler* is commonly called *Iſatodes*, like the Colour *Woad* gives.

This I once obſerved in a Young *Hyſterical* Woman, who Vomited *Blue* after the Death of her Father, and upon a *Surfeit*.

I obſerved the ſame *Blue* was Vomited by a Young Perſon, when all his *Stools* were *Black*; and this *Blue Choler* muſt be attributed to the *Vitriolic Acidity* of the *Spleen*, or ſuch a State of *Acid* mixed in the *Stomach* with *Yellow Choler*, and this Colour of preternatural *Choler* the *Ancients* attributed to too much *Aduſtion* of *Choler*, or *Torrefaction*, which brings it near to the Nature of *Atra Bilis*, and this *Choler* ought to be eſteemed the loweſt State of the *Atra Bilis*.

VII. *Choler* of a deep *Orange* Colour, is what the *Ancients* called *Æruginoſa Bilis*, and is the Effect of a *Cholera*, when the *Yellow Choler* is altered by the *Splenetic Acid*, and made *Corroſive*, as the *Ancients* deſcribe it, but it is of no conſiderable Taſte, as thoſe that Vomited it deſcribed it to me; it is of a *Brown* and *Yellow* Mix-

ture, as appears by the Linen ſtained by it. This Vomited plentifully often proves Fatal.

The Cure of this ought to be managed, as in the *Cholera*, by *Vomiting* plentifully at firſt, by *Glyſters* and *Laudanum*, but not *Purging*. It ſeems very probable to me, that it is the Effect of an intermitting *Fever*, and a Symptom of it, and requires the Uſe of the *Cortex*, with *Laudanum*, after Evacuation, with *Aqua Pulli*, or *Poſſet-Drink*, and *Glyſters*, and *Bleeding*, if the *Pulſe* will bear it. This *Choler* is a ſign of a *putrid* State of *Humours*.

VIII. *Choler* of a *Flaming* Colour ſeems to be of a high State of Digeſtion; ſo I have obſerved in a *Fitchet* which ſtinks much, a *Choler* of a *Red*, *Flaming* Colour, and the higher or hotter the *Choler* is, the leſs *Acerb Acidity* there is in the *Body*, and the higher its Colour is, the more the *Body* ſtinks.

In *River-Fiſh*, the *Choler* is of a *Citrine* Colour, which is only a *thin Tellow*, and is produced by a lower State of Digeſtion than the *Tellow Choler* of *Quadrupeds*. *Tellow Choler* becomes *Citrine* by diluting it, as it is probable that of *Fiſh* is much more diluted than the other. I taſted the *Choler* of a *Jack*, which was *Sweet*, *Bitter*, *Sub-Acrid*, *Slimy*,

Slimy, and of a Colour like *Oyl* of *Amber*, *Fiſh Choler* bites the Tongue, but is leſs *Bitter* than other *Choler*, becauſe there is leſs *Fat* in *Fiſh*, and therefore the *Choler* is leſs *Oleous* or *Bitter*.

The *Acrimony* or *Pungency* in *Choler*, is like that of *Acrid Plants*, or *Inſects*, without a *Salt* Taſte, and it ſeems an *Oyly Acid*, which, like that in *Soot*, is in a near Diſpoſition to be made a *Salt*, by Fire or Fermentation.

The Colour of the *Oyls* amongſt *Vegetables* very much explains their ſeveral Digeſtions.

Their *Paleneſs* is a Sign of a *Seroſity* in *Oyl* of *Walnuts*, and *Milky Juyces* are *Turpentines* diſſolved in *Water*.

Their *Slimineſs* of a *Crudity* in *Oyl* of *Linſeed*.

Their *Greenneſs* of an *Acidity* in *Oyls* of *Olives*.

The *Sweetneſs* of *Oyls* ſhews the middle State they are in betwixt a high and low Digeſtion.

To the *Yellowneſs* of *Turpentine* is joyned its *Acrid* Taſte, and *Bitterneſs*.

The *Blue Turpentines* are higher digeſted in *Flos Solis*, and *Hypericum*.

The *Roſins*, and *thick Turpentines*, reſemble the Conſiſtence of the *thick Vitelline Choler*.

The *Citrine Balſams*; as that of *Mecha*, and the *Black* ones, as that of *Peru*, repreſent the State of *Black* or *Citrine Choler*.

There are *Fœtid Balſams* and *Gums* which may anſwer the State of putrefied *Fœtid Choler*, which is in Stools of a putrefied Smell.

As to the *Atra Bilis*, I will reſerve the Diſcourſe of it to the Chapter of *Vitriolic Acidity*.

Choler may be coagulated by divers *Acids*, like the *Serum* of the *Blood*; but *Choler* moſt eaſily.

I put to the *Yellow Choler* of a *Hog*, which was about ℥ij. a ſmall quantity of *Spirit* of *Vitriol*, by which it turned into *hard* and *yellow Curds*, the *Serum* ſwimming on the top. I have obſerved ſuch hard *Concretions* in the Stools of ſome *Icterical* Perſons, which proceed from ſuch Coagulations by an *Acid*.

Spirit of *Salt* coagulated it leſs, and the Coagulations were of a paler Colour.

Spirit of *Niter* coagulated the *Choler* into *Green Curds*, which were very hard, and the *Serum* was very clear above the Coagulations.

The *Oyl* of *Tartar* nitrated coagulated *Choler* by its *nitrous Acid*.

The

The *Green Choler* of a *Chicken* was made by *Spiritus Nitri Dulcis*, of a more clear *Green* Colour.

Vitriolate Tartar coagulated *Green Choler*, and the *Coagulum* looked *Tellowiſh*, as the *Green Choler* always does by the Mixture of the *White Cremor* in the *Guts*, which is *Sub-Acid.*

Alum coagulated the *Green Choler* into *Tellow Curds*, but they looked *White* by adding a *fixed Salt*; ſo *Alum Waters* precipitate a *White* Colour by *Spirit* of *Sal Armoniac.*

Neither *Sal Armoniac*, nor common *Salt*, nor *Sal Chalybis*, coagulate *Choler.*

Salt of *Wormwood* made no Effervescence with the *Green Choler*; whence I inferr, that there is no looſe *Acid* in it to produce its *Greenneſs.*

Chymical Oyl of *Wormwood* ſwam upon *Choler*, whence it is evident, that *Choler* is not wholly *Oyl.*

Green Choler looked *Tellow* by a Mixture of burnt *Harts-Horn*, which may abate or alter the *Acid* of the *Green.*

It is evident, that *Choler* is not purely a *Stercus Liquidum*; for then it ought not to have been emptyed into the *Guts* ſo near to the *Stomach*, for its *Gall-Bladder* being there inſerted, every Motion of the *Guts* or

or *Stomach*, near its Inſertion, muſt evacuate ſome Part of it, to mix with the digeſted Meat deſcending from the *Stomach*.

The firſt Uſe I ſhall aſcribe to *Choler*, is the correcting the *Acidities* of the *Meat* digeſted in the *Stomach*, for that might other ways *Gripe* the *Belly*, or coagulate the *Chyle*, or thicken the *Blood*.

An *Acidity* is produced always by artificial Fermentations, and the ſame is evident in the *Contents* of the *Stomach* of *Pigs*, *Rabbits*, *Sheep*, to any ones Smell. The *Contents* of the *Carnivorous* coagulate *Milk*; and I found that *Bread* digeſted in the *Stomach* of a *Dog* coagulated *Milk*.

The *Bitterneſs* and *Acrimony* of the *Choler* corrects this *Acidity* of the *digeſted Meat*, and, by this means, volatilizes the *Chyle*, becauſe nothing fixes the *Blood* and *Chyle* ſo much as *Acids* do, eſpecially the *Oyls* and *Salts* in *Animal Humours* are coagulated by them.

Thus *Sulphur* is opened by *fixed Salts*, and *Spirit* of *Wine* by *Salt* of *Tartar* is rectified.

II. The Second Uſe of *Choler* is to prevent too great a Fermentation, or a perfect Putrefaction of our *Meats*; ſo *Hops* and *Wormwood* prevent the decay as well as ſowring of our Liquors.

Myrrh,

Myrrh, and other *Bitter Gums*, preſerve *Dead Carcaſes* from Putrefaction. Other *Bitters*, as the *Cortex*, *Gentian*, *Centaury*, and *Chamædrys*, by their *Bitterneſs*, ſtop the Fermentation of *Fevers*, and hinder the Putrefaction of *Humours*, and the Gangreen of the *Solid Parts*; from hence we may inferr, that *Choler* may prevent the corruptive Fermentation of our *Meat* and *Humours*, as well as correct their *Acidities*.

III. The Coagulation of the *Choler* by the *Acidity* of the *digeſted Meat*, helps the *Oyl* of the *Meat* to ſeparate from the *Fæces*, which are of an *Earthy* Nature, to which it was united by an *Acidity*, and the *thick nutritious* Parts of the *Meat* are eaſily extracted from the reſt by the *liquid Juyces* of the *Stomach*, and both the *Oyly* and *Nutritious* Parts being diſſolved in a *Liquor* conſtitute the *white Milky Liquor*, which is our *Chyle*.

I took ſome dry Reliques of *Peas*, digeſted in the *Stomach* of a *Hog*, who was fed twenty four Hours before he was Killed with *Peas* only, and *Water*, which ſmelt like boiled *Gooſeberries*, pleaſantly *Acid*: I put ſome *Water* to the digeſted *Peas*, and made it *Milky*, by Addition of ſome of the *Hog's Gall*. To the *Liquor* ſqueezed out of the *Contents* of the *Stomach*, I put ſome *Gall*, which

which was coagulated by it; from whence it appears, that *Choler* is naturally coagulated by the *Acid* Reliques of the *Stomach*.

I put ſome *Spirit* of *Sal Armoniac* to *Gall* coagulated by *Spirit* of *Vitriol*, and it produced a *Milky* Colour; from both theſe Experiments I did collect, that the Coagulation of *Choler* by the *Acid* of the digeſted *Meat*, together with the *Oyly* Parts of the *Meat*, produce the *White* Colour of our *Chyle*; ſo in Preparation of *Lac Sulphuris*, the *Milky* Colour follows the Precipitation of the *Tartar* by an *Acid Spirit*, and the *Oyly* Parts of the *Sulphur* give a *Milky* Colour; *Oyly* or *Reſinous Liquors*, as *Tincture* of *Benjamin*, *Turpentine* it ſelf, being diluted with *Water*, become *Milky*. *Emulſions* are *Milky* from the *Oylineſs* of their *Seeds*. The beſt *Oyls* thickened by cold, and the *Fat* of *Animals* have a *White* Colour; and *Milk* it ſelf has its *Whiteneſs* from the *Caſeous Fibers*, and its *Buttery Oyl*.

IV. The *Choler* has its groſſer Parts ſeparated by the *Acidity* of the *digeſted Meat*, and that gives Colour and Conſiſtence to the *Excrements*, and the *Choler* abounding with much *Slime*, as appears by its *Ropyneſs* that inviſcates the Groſs indigeſted Parts of the *Alimentary Maſs*, whereby the *Chyle* (like *Liquor* clarified by the *White* of *Eggs*) becomes

becomes more pure from the Sediment of *Choler*, and the indigeſted Parts of the *Meat*, and ſo only conſiſts of a *thin*, *ſlimy*, *nutritious Juyce*, with *Volatile*, *Spirituous*, *Oyly* Parts, which can only paſs the *Canals* of the *Lacteals*.

V. The Fifth Uſe of *Choler*, is to help Sanguification, and the Production of an *Animal Salt*, of which I will diſcourſe in the Chapter of *Saltneſs*.

I mixed the *Bitter* Decoction, *ſine ſenâ*, with *volatile* and *fixed Salts*, and theſe abated its *Bitterneſs*, which may intimate the Uſe of them in ſome *Choleric* Caſes. *Cream* of *Tartar* and *Spirit* of *Sulphur* more evidently deſtroyed the *Bitterneſs* of it. *Common Salt* and *Spirit* of *Salt* ſeemed rather to increaſe than deſtroy the *Bitterneſs* of the Decoction. *Mercurius dulcis* made it *Muddy*, but little altered it: the ſame effect probably thoſe Medicines will have on *Bitter Choler*.

CHAP.

CHAP. X.

Of the Hot Scurvy, *or* Oyly, Vitriolic, Rancid *State of the* Blood.

THAT *Dyſcraſie* of the *Blood*, wherein the *Oyly* and *Acid Particles* are too highly exalted, is commonly called the *Scurvy*, which is divided into the *hot* or *cold Scurvies*, according to the various Conſtitutions of *Blood* it falls into, for where the *Oyl* is more abundant in the *Blood* than the *Acid*, it produces the *hot Scurvy*, the Signs of which are, the high Colour of the *Urin*, *red Spots* in the *Skin*, from the coagulated or putrid *Blood* fixing there in its Circulation, the *Gums* are *Bloody*, they are ſubject to *Fevers*, *Dyſenteries*, *Choleric Diarrhœa's*, *Night-Sweats*, and *Conſumptions*; theſe Symptoms are produced by the *rancid* or *ſcorbutic Bloods*; but in the *nervous Liquor*, the following Symptoms, the *Running Gout*,

Gout, or *Rheumatiſm* in the *Nerves*, *Convulſions*, *Palſies*, *Apoplexies*, *hot Cholics*, and *Aſthma*, and *Crackling* of the *Bones*. Since the *Scurvy* is cured by *Acid Fruits*, and *crude Plants* in *Seamen*, who have long lived on a *Salt* Diet; I may hence, as well as from the mentioned Symptoms, obſerve, that the *Scurvy* depends on too high a Fermentation of the *Blood*.

The Cauſes which produce the *Oyly*, *Acid* Temper of the *Blood*, are thoſe evident Cauſes which excite an Ebullition, or Efferveſcence in it, as in all hot Diet of *Wines*, *ſtrong Drinks*, and *Salt Meats*, *Sea Air*, and *Fiſh*, which ſome putrefie.

2. The *Paſſion* of the *Mind*, and *Studies*, and a *Sedentary Life*, or *Suppreſſion* of *Evacuations*.

3. The *Scurvy* is Hereditary, or Contagious, or ſucceeds other Diſeaſes; as *Fevers*, *Rheumatiſms*, *Melancholy*, *Agues*, eſpecially the *Quartan*.

I. The Cure conſiſts in Evacuating the *hot*, *ſalt*, *bitter*, *acrid*, and *vitriolic* or *viſcid Humours*, by the *Vomits* and *Purgers* mentioned in the Cure of too high a *Fermentation*, and frequent *Bleeding*.

II. By Evacuating the *Salt Serum* by gentle *Sweats*, as will be hereafter mentioned, or a Diet-Drink of *Sarſa* and *China*, of

of each half a Pound, *Harts-Horn* and *Ivory Shavings*, of each one Ounce, boil all in eight Gallons to ſix, and add *Juyces* of *Water-Creſſes*, *Brooklime*, of each two Pints, of *Gill* and *Liver-wort*, of each one Pint, ſix *Nutmegs* ſliced, put all into ſix Gallons of *Ale*, drink three Draughts in a Day of it.

III. The *Salt Serum* may be evacuated by *Urin.*

By *Terebinthinates*; as tops of *Pine* in all our *Ale.*

IV. The *Oyl Acid Fætor* of the *Blood*, and its high Fermentation, is to be corrected, By,

1. *Acids*; as *Wood-Sorrel*, *Juyces* of *Oranges* and *Limons* mixt with the cooler *Antiſcorbutic Juyces*, *Conſerve* of *Hips*, *Wood-Sorrel.*

2. The *Mucilaginous crude Juyces* of ſome *Legumens* are uſed; as *Juyce* of *Fitches* ℥ij. in *White-Wine*, or *Juyce* of *Fumitory*, or *Green Peas*, or *Green Corn* diſtilled.

3. Other cooling *Mucilaginous Plants*, or *Animal Parts*, are uſed to cool the *Blood*, and dilute it; as *Juyce* of *Borrage*, *Bugloſs*, *Barley Water*, *Emulſions*, drinking *Milk* and *Water*, *Antiſcorbutic Milk Waters*, *Mineral Waters*, or *Fountain Water*, or *Water* and *Wine*, *Lettuce Water*, with *Sal Prunell.* and *Syrup* of *Limons.*

4. The

4. The *Acerbs* ſupply their quantity of *cruder Acids* wanting in the *Humours*; as *Juyces* of *Apples*, *Grapes*, the *Sorrels*, *Houſe-Leek*, the *Juyce* of *ſpotted Arſeſmart*, or *Houſe-Leek* in *bilious Diarrhœa's*. *Coral* prepared with *Juyce* of *Limon*. *Purſlain Water* with *Sal Prunell*.

Theſe *Styptics*, *Acerbs*, ſtop the hot Fermentation of *Humours*; as *Plantane* boiled in *Broths*, and *Ribwort Plantane*.

5. *Auſtere Styptics* do the ſame, as *Bark* of *Tamarisk*, *Aſh*, the *Cortex*.

6. *Sweet Styptics* of the *Fern* Claſs; as *Polypody*, *Ceterach*, *Maiden Hair* do the ſame.

V. The Coagulations by the *Scorbutic Acidity* may be diſſolved,

1. By the *watery Antiſcorbutic Acrids*; as *Juyces* of *Brooklime*, and its *Conſerve*, and *Scurvy-Graſs* and *Water-Creſſes* may be put into *Milk* with the *Juyce* of *Orange* and *White-Wine*, and that to turn into *Poſſet-Drink*.

Spirit of *Scurvy-Graſs* and *Sal Armoniac* may be given in *Milk*, or the *Juyce* of *Scurvy-Graſs* may be ſo uſed. ℞ *Conſerv. Beccabungæ*, *Rad. Cich. Lujulæ*, *an.* ℥ij. *Raſ. Eboni Pulv.* ℥iij. *Sal Prunell. Diatrion*, *Santal. an.* ℥ij. *cum Syr. Lujulæ. F. Elect.*

2. By *Vitriolic Chalybeates*; as *Sal Vitrioli* diſſolved in *Antiſcorbutic Milk Waters*, or *Willis's Steel* ſo diſſolved, or *Mineral Waters Chalybeate*, *Steel* prepared with *Juyce* of *Apples*, or *Wood-Sorrel*, or *Oranges*, and a *Tincture* may be extracted with *Spirit* of *Scurvy-Graſs*, *Tartar Chalybeate*; as *Cremor Tartari* ℈ij. *Sal Prunell.* ℈i. *Vitriol. Martis* gr. iij. *Capiat cum Juſculis alterantibus.*

3. By mixed *Salts*; as *Sal Armoniac. Arcanum duplicat. Vitriolat. Tartar. Nitrous Acids*; as *Sal Prunell.* or Mixture of different *Salts*; as *Cream of Tartar*, and *Salt*; *Spirit* of *Salt*, and *Spirit* of *Scurvy-Graſs* mixt.

4. By *Teſtaceous Medicines*; as *Crabs Eyes.*

VI. The *Choler* muſt be cleanſed,

1. By *Cichoraceous Bitters*; as *Cichory*, *Dandelion Roots.*

2. By *Dock Bitters* and *Sorrel Roots* in *Beer*, or *clarefied Whey.*

3. By Chewing *Rhubarb*, and *Purging Waters*, and the *Chalybeate.*

4. It muſt be diluted by *Milk* and *Water*, by Avoiding fermented *ſtrong Liquors*, and all *hot Diet.*

CHAP.

CHAP. XI.

Of the Viſcidity *of the* Serum, *or* Inſpiſſation *of the* Chyle *new mixed with it in the* Sizie, Rheumatic, *or* Inflamed Bloods.

THERE is a Natural *Slimy Viſcidity* in all the *Lacteal Lympha's*, and *Milky Humours* of *Animals*, and this is like diſſolved *watery Gums* in its Natural State; but beſide this *Viſcidity*, there is another naturally in the *Cake* of *Blood*, which makes it congeal and ſtiff when cold: this natural *Viſcidity* is altered by too high a Fermentation of *Humours*, and becomes like *Inſpiſſate Gums*, which is the *Gummy Viſcidity*, or *Gelatinous*, like *Jelly Broths*.

1. The *Lympha Lactea*, ſuch as the *Spittle*, becomes of a *Gummy Conſiſtence*, and covers the *Tongue* with a *white Skin*, and

all the *Phlegm* from the *Salivatory Glands* is *Viſcous*.

2. The *Mucus* of the *Aſpera Arteria* is *Viſcid*, and is formed into *Globuli*, ſuch as the *Grando Pulmonum*: This *Mucus* is alſo thickned by *Stagnation*, during which, the Heat of the *Body* dries it; or the *Air* by its Cold, or *Nitrous Particles* thickens it; or the *Nutriment* of the *Nervous Membranes* is depoſited into the *Veſiculæ*, being depraved or hindred in its Aſſimulation.

The *Sub-acid Mucus* of the *Stomach* and *Guts* is made more *Viſcid* by *Fevers*, or *hot Diet*, and this lines the inſides of the *Stomach* with a *Pituitous Saburra*, which hinders the *Senſe* of the *Appetite*.

4. The *Lymphatic Vehicle* of the *Spirits* is made more *Viſcid* in the *Palſie*, *Apoplexy*, and *Sleepy Diſtempers*.

5. The *Humours* of the *Eyes* are ſometimes very *Viſcid*, and reflect the Light by flying about in the *Eye*, like Motes in the *Sun*, and the *Thickneſs* of the *watery Humour* is a *Cataract*, but that of the *Cryſtalline* produces a *Glaucoma*.

6. The *Thickneſs* of the *Chyle* produces *Obſtructions* in the *Lacteals*, and that in the *Breaſt Inflammations*.

By the *Thickneſs* of the *Lacteal Lympha's Scrophulous Tumours* are produced in all the

the *Conglomerate Glands*, or at leaſt *Catarrhs*.

The *Seminal Lympha* of the *Vagina* or *Teſticles* being too *Viſcid*, may produce *Sterility*.

This *Viſcidity* of the *Chyle*, and its *Lympha's*, may be called the *Gummous Viſcidity*, which is produced by *Thickning* their Natural *Mucilage*, for a *watery Gum* differs only from a *Mucilage* by its *Inſpiſſation*; for the *Mucilages* of *Plants* may be boiled into a *Gummy*, *Tenaceous* or *Emplaſtic Conſiſtence*, and the *White* of an *Egg* grows hard by the Heat of the Fire.

There is another Species of *Viſcidity* proper to the *Serous Lympha*, when it is inſpiſſate by *Heat*, or congeals by *Cold*, or coagulates by an *Acid*. *Broths* long boiled become *Viſcid Jellies*, and they melt with the *Heat*, becauſe of the *Oylineſs* mixed with them. *Turpentines* and *Oyls* leave a *Colophony* upon the Separation of their *thinner Oyl*; and ſuch a ſticking gluey Subſtance is made by the *Oyl* of *Harts-Horn*, when the *thinner Oyl* is diſtilled off from it.

The *Serum* of the *Blood* inſpiſſates, as it does in a Spoon at the Fire, by long *Fevers*, and it produces *Tumours*, and *Obſtructions* of the *Parts*, and *Rheumatic Pains*,

and *Puſtules* in the *Skin*. This *Viſcidity* of the *Serum* makes the *Urin* to have *thick Contents*; as in *Rheumatiſms*, and all *Inflammations*, *Catarrhs*, *Fevers*. It produces *Pains* by ſtagnating in the *Lymphatics*, and by being ſtopt out of its *Glands*.

The *Blood* it ſelf becomes of a *viſcid Conſiſtence*, and produces *Polypous Concretions*, and *Palpitations*, and *ſudden Syncopes*. The *viſcid Blood* ſtops the *Flux* of the *Menſes*.

The *Conſiſtence* of the *Choler* is thickned by too hot a Diet, which thickens its *ropy Slime*, and produces the *Jaundice*.

The *Slimy Lympha* of the *Spleen*, thickned by too high a Fermentation, produces *Obſtructions* in the *Spleen*, or this is thickned by being coagulated by its own innate *Vitriolic Acidity*, or by Stagnation of the *Slimy Humour*, or Tranſmiſſion of *Viſcid Humours* there after *Quartans*. The *ropy Vehicle* of the *Bile* may be coagulated by the *Vitriolic Acid* of the *Spleen*, and produce the *Atra Bilis*.

The *Salſo-acid* Temper of the *Blood* may coagulate the *new Chyle* which comes into it, and ſo produce all the *Inflammations*, *Pains*, *Tumours*, *ſudden Death*, *Suffocations* in *Catarrhs*.

The evident Cauſes of the *Gummous* and *Gelatinous Viſcidities*, are,

1. Too

1. Too much external Heat of *Air*, *Cloths*, *Baths*, *Fire* which inſpiſſate by Evaporating the *watery Vehicle* of the *Caſeous Parts* of the *Serum* and *Lympha's*.

2. Too much *Cold* thickens *Liquors*, which, by Conſtriction or Compreſſion, ſtops the Motion of the *Active Particles*, which cauſe their *Fluidity*, and their *Viſcid Particles* cohere like *Oyls* thickned by *Cold*, or the *Blood* thickned by the *cold Air*, when out of the *Vein*.

3. *Acrid Meats*, or the *Aromatic Spices*, or *Vinous Liquors*, by their *fiery Particles* thicken the *Mucilaginous Humours*; ſo the *White* of an *Egg* is hardened by *Spirit* of *Wine*, and the *Serum* of the *Blood* in them who drink *Brandy*.

4. The thin *Serous Parts* are evaporated by too much *Sweat*, immoderate *Exerciſes*; by *Watchings* and *Paſſions* the quantity is abated; by *Diarrhœa's*, much ſpitting in taking *Tobacco*, or great *Fluxes* of *Urin*, by which, the *Blood* is made *grumous*, or void of *Serum*.

5. The great Uſe of *Viſcid Meats*; as *Fiſh*, *Jellies*, *Mealy Vegetables*, *Rice*, *Wheat*, &c. or by *ſtrong*, *thick*, *Viſcid Ale* or *Wines*, or the much Uſe of *White Bread* made without *Bran*.

The internal Cauſes of *Viſcid Humours*, are,

1. A *Rancid*, *hot* Fermentation of the *Meat*, ſo as to reſemble *fryed Eggs* by their *Ructus*.

2. *Acrid Choler*, which haſtens the *Digeſtion*, and quickens the *Sanguification*, and evacuates the *Serum* by *Urin*.

3. The *Natural*, *Oyly* Temper of the *Blood*, which reſembles the *ropy Conſiſtence* of other *Oyly Liquors*, or the *Salſo-Acid* Temper which carries the *Serum* off by *Urin*, as the Medicines of that Taſte, or elſe a preternatural Fermentation, which makes the *Blood* of the *Scorbutic* like a *Jelly*.

4. The *Blood* is often coagulated by its own *Acids* ſo, if, through Exerciſe, or hot Diet, it be rarified, and ſuddenly cooled with external Accidents, as ſitting in a cool Place, or cold Air, the *Serum* of the *Blood*, or the new *Chyle* mixed with it, becomes a *viſcid Jelly*, which ſtopping its Circulation in the *Glands*, *Membranes*, and *Muſcles*; it produces all the *Inflammations* with Pain and Heat, ſo *Milk*, when *ſowre*, often coagulates by being boiled, and *Milk* injected into a *Vein* is preſently coagulated.

5. The *Vitriol Acid* of the *Spleen* coagulating the *Lympha Lactea* produces the *Scrophulous Tumours*, or the *Cancerous*; by coagulating the *Serum* it produces the *Arthritis*

thritis Vaga Scorbutica, and this is properly the *Caseous Viscidity* which is in all *Animal Humours*, and may be precipitated from them by mixing an *Acid* to precipitate it, and coagulate it.

6. *A Putredinous Ferment* coagulates all *Humours*, as *Milk* with *Rennet* is turned; the *Plague Infection* coagulates the *Blood*, and the *Exanthemata* are its coagulated and mortified Parts; the *Serous Lympha*, by the venomous Ferment of the *Itch* and *Pox*, is turned into *putrid Matter*; and the Bite of a *Viper* coagulates the *Blood*, and precipitates its *Viscid Parts* from the rest of the *Mass*.

The Cure of the *Viscidity* requires,

I. A thin, watery cool Diet, and Abstinence from fermented Liquors; as *Whey*, *Milk* and *Water*, *Wine* and *Water*.

II. The hot Contents and Ferment of the *Stomach*, and *Acrid Choler*, must be evacuated by the *Vomits* and *Purgers* described in the Cure of *too high a Fermentation*.

But it must be observed, That *Purges* in all *Inflammations* are improper in the beginning, but very profitable after large *Phlebotomies*; when the *Viscid* has had time to putrefie and digest, it will easily pass the *Intestinal Glands*, which it cannot do at first;

firſt; and, for the ſame reaſon, *Diuretics* nor *Sudorifics* do no Service till the latter end, that is, after fourteen days, when the *Viſcid* is putrefied; and this is agreeable to Experience in *Rheumatiſms*.

III. Frequent *Bleeding* carries off much of the *Viſcid Serum*, and Vomiting that of the *Viſcid Slime* in the *Stomach*, as well as the *Choler*.

IV. The *Acrid Ferment*, and *ſharp Choler*, and the great *Fervour* of *Humours*, muſt be corrected by the Taſtes mentioned in the Cure of *too high a Fermentation*.

V. The preternatural *Scorbutic Fermentations* muſt be cured as the *hot Scurvy*, or prevented.

VI. All *Putredinous* Ferments are to be avoided, as well as ſudden taking cold, or drinking cool Liquors.

VII. The *Viſcidity* of *Humours* muſt be diluted by watery Liquors; as *Aſſes Milk*, *Whey*, *Mineral Waters*, and *Milk Waters*, which may ſupply the *thin Serum* which is evaporated.

VIII. The *Viſcidity* muſt be attenuated, and incided, and gently putrefied, by which it is made more *fluid*, ſo that it may paſs off by *Stool*, or *Urin*, or *Sweats*; ſo the *viſcid Spittle* in the *Pipes* of the *Lungs* is at firſt *glutinous*, and ſticks too faſt to be

Coughed

Coughed up; but after ſome Days it becomes *purulent*, and more *fluid*. In *Rheumatiſms* the *Sizineſs* putrefies after ſome time, and paſſes off *thick Contents* in the *Urin*, or *glutinous Sweats*: The *Salſo-Acids* will help its paſſing off; as *Sal Prunell. Vitriolate Tartar*, *Sal Armoniac.*

We know no Medicines which will help the Putrefying of the *Viſcid*, but thoſe which ripen *Impoſthumes*, or help the ripening of the *Phlegm* in the *Lungs*, as the *ſweet Slimy Roots*; and Fruits may be uſeful, as *Pectoral Decoctions*, and *Ptyſans*, and keeping the Body in a moderate Heat, and moiſt thin Diet.

The *watery Antiſcorbutics* dilute the *Viſcidity*, and incide it, or elſe are good *Diuretics*; but I learnt by the following Experiment, that no *Pungency* can incide or attenuate the *fizy Blood.*

I cut the *Skin* off the top of ſuch *Blood*, after it was cool in the Diſh, and put it into *Spirit* of *Sal Armoniac*, which could not at all diſſolve it, neither do I think it poſſible to reduce the *White* of an *Egg* boiled, to its former *Fluidity*. It is, therefore, by *Putrefaction* alone that Nature diſſolves and attenuates all our *Viſcid Humours*, and that makes *Eggs* fluid.

IX.

IX. The Coagulation of the *Chyle* or *lacteal Lympha's*, or the *Serum*, muſt be prevented.

1. By Evacuating all *Acids* by *Vomits*, and *Aloetic Purgers*, to which *Salt* of *Wormwood*, *Steel*, or *Mercurial Powder*, or the *Teſtaceous*, are added.

2. The *Acidity* is cured by *Steel*, or *Mercurial Medicines*, or *Salts*, Aſhes of *Animals* and *Vegetables*, the Calces of *Minerals*, by *petrefied Stones*, or the *teſtaceous Powders*.

X. The Circulation of *Viſcid Humours* may be promoted by *Chalybeate Vitriols*, by *Volatile*, *Oyly Salts*, or by the *Aromatic Acrids*, or *bitter Plants*. So Agitation alters the *Viſcid Slimineſs* of the *White* of an *Egg*.

XI. The attenuated or putrefied *Viſcid* muſt be expelled by *Sweats*.

1. By the *Acrid Woods*, or *Volatile Salts*.

2. By *Cathartics* of *Mercurials*, which precipitate the *Viſcidities* by their *Styptiſity*, and mix with all *Animal Acids* moſt freely, as appears by Killing it with *Spittle*, and paſſes the *Lymphatics* and *Glands* moſt eaſily of any Medicine.

Or by *Cathartics*, which are *gummous*, and by that cohere with the *Viſcid Slime* of *Animals*, and purge them off, as *Gum Pills*, with *Purging Roſins*.

XII.

XII. The putrid *Viſcid* may be precipitated out of the *Blood* by *Styptics*, as the *Cortex*, or *Acerbs*; ſo *Sloes* pounded in a Mortar are put into *ropy Wines*, to precipitate their *Mucilage*, and they ſhake them together, and after eight Days it is clear.

Vitriol. Martis much helps the Depuration of the *Blood* after *Rheumatiſms*.

CHAP.

CHAP. XII.

Of the Saltneſs *of the* Blood, *and other* Humours.

1. AN *Animal Saltneſs* may be taſted in the *Stomach* of the *Carnivorous Animals*; but that depends on the Taſte of their *Fleſh-Meat* digeſted, which contains the *ſalt*, *ſerous* and *nutritious Juyces* of another *Animal*, or elſe it is the natural Taſte of the *Lympha*, which is the Ferment of their *Meat*, and is produced in the *Blood*, and brought thence into the *Stomach*; but this *Saltneſs* depends upon the Nature of our Diet, and is externally taken into the *Humours*, and not produced by them; but we may inquire whence thoſe *Animals* have a *Saltneſs* of *Blood*, who feed on *Vegetables* which taſte not *Salt* in the *Stomach*.

2. A *Salt* is made in the *Guts* of *Birds*, and other *granivorous Creatures*, by the Mixture

Mixture of *Acrid Bile*, and the *Acidity* of the *Cremor*, expreſſed in the *Gizern*, from the *Seeds* on which they feed, and which have not acquired any *Salt* Taſte in the *Stomach* by Digeſtion.

That an *Acid* makes part of a *Salt* Taſte, is ſufficiently evident by the Diſſolution of *Crabs Eyes* in *Vinegar*, which produce a *Saltiſh* Taſte.

Common *Sal Armoniac* taſtes more *Salt* than either *volatile* or *fixed Alkalies*, both which probably have ſome *Acid* in their Compoſition, as well as that; for *Green Plants* yield more *Salt* than the *dry*; and becauſe we obſerve no *Acid* in the Diſtillation of *volatile Animal Salt*, nor much *fixed* in the *Caput Mortuum*, it is probable, that the *Acid* in the *Humours* is ſpent in the Compoſition of the *volatile Salt*, and gives a *Salt* Taſte, for an *Acid* put to a *volatile* or *fixed Salt* makes them taſte more *Salt*. ℥i. of *Salt* of *Harts-Horn* will imbibe ℥ij. of *Spirit* of *Salt* before the Ebullition ceaſes, and they be reſolved into a Liquor; and from hence it appears, how much the *volatile Acrid* of *Bile*, and the *Salt* produced in the *Blood*, may imbibe from the *Acid* of digeſted *Meat*.

Common *Salt* yields a great deal of *Acid* upon Diſtillation; and we can meet with nothing

nothing of a *Salt* Taſte in Nature, but what is made of an *Acid* and *Earth*, or other *Salt*. The *volatile* and *fixed Salts* are made by the Fire, and they are moſt clear from *Acidities*.

We taſte this *Saltneſs* in the *Chyle* as ſoon as it comes into the *Lacteals*, and this is of a *Salſo-Acid* Taſte; but when it is vitiated by too great an *Acidity* of the *Meat* too high digeſted, or the *Acrimony* of the *Choler*, it may properly be called a *Muriatic Saltneſs*.

This Natural *Saltneſs* ſwims in the *Serous* Part of the *Chyle*, and paſſes with it into the *Blood*, and the *Urin* ſeems to be produced from this *Salſo-Acid Serum*, when it has parted with the more *Caſeous*, *Nutritious* Parts of the *Chyle* in the *Blood Veſſels*.

That the *Choler* may help to produce the *Excrementitious* Parts of the *Urin*, as well as that of the *Stools*, ſeems probable, becauſe we obſerve *Stones* to be bred in the *Gall Bladder*, as well as in the *Urinary Paſſages*, which ſeem to be *Choler* coagulated.

Bitters are accounted *Diuretics*, and the *Gall* does naturally paſs by the *Urin* in the *Jaundice*, and uſually gives a *Citrine*, or *Red*, or *Yellow* Colour, or *Black* to the *Urin*.

Choler

Choler eaſily diſſolves in *Water*, and ſeems to give it a Colour like *Urin.* All *mixt Salts* reſemble the Mixture of *Choler*, and the *Acid* of the *Meat*, and are *Diuretic*; as *Sal Armoniac*, *Tart. Vitriol. Sal Succini*, *Sal Prunellæ.* All *Acids* are *diuretic* by fixing on the *Choler*, as the *Tartar Acid* of the *Stomach* does; and *volatile Salts* mix with the *Acid* in the *Stomach*, and paſs by *Urin.* The ſuperfluous Parts of the *Chylous* Subſtance produce the *Contents* in the *Urin*, which makes it probable, that the *Salſo-Acid* part of the *Chyle* produces the *ſalt*, *ſerous* part of the *Urin*, and that *Salſo-Acid* is produced from the *Choler.*

3. There is another ſort of *Saltneſs* which we taſte in the *Serum* of the *Blood*, and this is in a great quantity.

Thoſe *Animals* who feed only on *Graſs* and *Fruits* digeſt their *Meats* in their *Stomachs* only into a *volatile Acidity*, and not a *Salt* Taſte; theſe therefore muſt farther digeſt their Nouriſhment till it come near to a *Putrefaction* before it can produce an *Urinous Salt*, for we cannot extract any *volatile Salt* out of *Vegetables* till they have been putrefied, and then they yield *Urinous Spirits*, and by putrefying *Blood*, *Urin*, or *Choler*, a plentiful *volatile Salt* is produced, ſeparable by a gentle Heat.

The *Sanguification* of our *Aliments*, diſſolved by Digeſtion, ſeems to have theſe ſeveral ſteps; for by correcting the *Acidities* of them, they are turned into *Blood*. *Firſt*, The *Choler* mixes with the *Acidity*, and turns the *Chyle White*. Next, The *ſalt Serum* of the *Lymphatics* mixes with the *Chyle*, and turns it *Roſy* or *Reddiſh*. Laſt of all, The *Salt* of the *Blood*, and the *Oyly* Parts of the *Blood*, unite with the *Oyly Acid* Parts of the *Chyle*, and the more *Serous* Part turns into *Serum*, which contains the *Caſeous* and *Watery* Parts, and the *Salſo-Acid Aqueous Superfluities* paſs off by *Urin*.

The Natural *Tartar* in the *Chyle* mixing with the *Salt* generated in the *Blood* produces the *Armoniac Salt* of the *Blood*, which if it were purely *Volatile*, it would preſerve the *Blood* from Coagulation, as *Spirit* of *Harts-Horn* does, and would more eaſily riſe by Diſtillation, but neither of theſe happen; and *Spirit* of *Sal Armoniac* blackens the *Blood*, which is taken from the *Vein*, if we bleed upon it; but the natural *Salt* of the *Blood* rather makes, or at leaſt does not hinder, the *Floridity* of the *Blood*, and therefore I call the *Salt* of the *Blood* a mixt *Armoniac Salt*, produced by a half Putrefaction, or long Reſolution of

of the Parts of our *Chyle*, in which the *Oyly Acids* of the *Blood* joyn with ſome terrene Parts, upon the ultimate Reſolution of the *Nutritious Juyces*, and produce a *Salt* which has that Taſte from the Mixture of an *Acid* and *Earth*, and the *Volatility* and *Pungency* depends on the *volatile Oyl* mixt with them; this ſmells *Urinous*, and is carried off naturally by *Sweat* and *Urin*.

By the Riſe of the *Muriatic Saltneſs* from the *Choler* it appears, that *bilious* States of *Humours*, by a higher Digeſtion, become *Saline*, or *Muriatic*, and the Signs of each Conſtitution differ only in degrees.

The *Pulſe* is great, frequent, and hard; the *Thirſt* is great, and they drink frequently; their Taſte of the *Saliva* is *Salt*; the Colour of the *Urin thin*, *citrine*, *ſalt* or *bitteriſh*; the *Habit* of the *Body* is *thin* and *lean*; the *Heat* is *ſharp*, and the *Stools* of a *burnt Yellow* Colour. Cool things agree with them, but ſalt and hot inflame them, and they ill bear *Faſting*.

The *Chyle* is *Salſo-Acid*, and that makes the *Lacteal Lympha* of that Taſte, and then produces *Thirſt*, *Vomiting*, or *Gripes*, *Diarrhœa's*, or *Catarrhs*, and *Inflammations* of the *Mouth*. The *Semen* is made ſtimulating in the *Salacious*.

The *Nervous Juyce* being *ſalt*, produces *wandring Pains*.

The *Salt Serum* being over *ſalt*, produces the *Stone*, and *Gout*, and *Strangury*.

The *Saltneſs* of *Nurſes Milk* produces *Pains* in the *Breaſt*, and *Gripes* in the Children, and *Sore Mouths*.

The *Saltneſs* of the *Nutritious Juyces* produces the *Scab*, or *Conſumption* of the *Parts*; it deſtroys its Natural *Caſeous*, *Nutritious Parts*, and carries them off by *Urin*.

The *Blood* is made more *thin* by being very *ſalt*, its *thick Viſcid Parts* being corroded or precipitated, as in *Hæmorrhagies*; and corrodes, as in the *Menſes*.

The *Choler* is made more *acrid* and *bitter*, and of a darker *Brown* Colour.

The *Juyces* of the *Spleen* become *Salſo-Acid*, and leſs *ſlimy*, and leſs fit to ſeparate the *Choler* from the *Blood*.

The *Tears* of the *Eyes* corrode and inflame them when over *ſalt*, and dry into a *Gummineſs*.

The *Salt Saliva* corrodes the *Teeth*, and the *Gums* ſhrink or dry, and waſte away, as in the *hot Scurvy*.

An *Atrophy* dries up the *Fleſh*, as *Meat* over-ſalted ſhrinks.

The external Cauſes of the *Muriatic Saltneſs*, and the *Armoniac Saltneſs*, very much

much are the ſame, but theſe particularly of the *Muriatic Saltneſs*.

1. *Salſo-Acid Aliments*, *Salt Fiſh*, *Salt Water*, *Salt Sea Air*.

2. The Evacuations of the *Acrid Choler*, and the *Spleen Acid* or *Tartar Acid* being ſtopt in the *Binding* of the *Belly*.

The external Cauſes of the *Urinous Saltneſs*, or the *Armoniacal*, are,

1. *Acrid*, *vinous*, *bitter* and *aromatic Meats*. *Faſting* makes the *Humours* more *acrid*, and *ſweet Diet* becomes *bitter*, *acrid*, on Digeſtion.

2. A *laborious Life*, with much *Exerciſe*, too much addictedneſs to *Venery*; for the *Lympha* returning from the *Teſticles* becomes *fœtid*, and ferments the *Humours* more.

3. Too much *Watching*, *Anger*, *Cares*, inflame the *Spirits*.

4. The Evacuation of the *Salt Serum* by *Water* or *Sweat* being ſuppreſſed, or the *Binding* of the *Body*.

Whatſoever ferments the *Blood* too much breeds *Choler*, and that the *Animal Saltneſs*.

The internal Cauſes of *Saltneſs*, are,

1. The Natural *Saline* Temper of the *Blood*, which ſupplies a Ferment for the *Chyle* of the ſame Nature, to turn it into the like *Saltneſs*.

2. Too quick a Circulation of the *Blood* excites too great an Ebullition, and makes the *Choler* more *acrid*, and the *Salt* more *ſharp*, and in greater quantity.

3. The *acrid Choler*, and *ſharp Acid* of the *Spleen*, or *Tartar Acid*, which is *corroſive*, produce the *ſharpeſt Salt*.

4. A preternatural Putrefaction in *Fevers*, or long *Effervescences*, make the *Blood* very *ſalt*. So a *Cancer*, *Fiſtula*, the *Itch*, or *Lues Venerea*, or *Conſumptive Lungs*, *Kidnies*, or other *Viſcera*, give a Ferment to the *Blood*, and putrefie it into a *Saltneſs*.

The Cure of the *Muriatic* and *Armoniac Saltneſs* requires,

I. To abſtain from fermented Drinks, and to uſe watery Liquors; as *Milk* and *Water*, and the Decoction of the *cooler Woods*, *Wine* and *Water*, or *Water* boiled with *Coriander Seeds* and *Sugar*.

To abſtain from *Salt Meats*, and thoſe dried in *Smoak*, or *Pickles*.

To abſtain from Ferments; as *old Cheeſe*, *Fiſh*.

To uſe ſlimy Meats; as *new Cheeſe*, *Fruits*, *Farinaceous Meats*, and *Milk Meats*, *Snails*, *Tortoiſes*, *Jellies*, *Cray Fiſhes*, *Tripes*, and the *Feet* of *Animals*, and *Young Pigs*, *Goat*, *Lamb*, *Veal*.

In

In ſhort, The Diet muſt be *crude*, *watery*, *acerb*, *mucilaginous*, *farinaceous*, *ſubacid*.

The *Air dry*, and not *foggy Sea Air*.

II. The *Salt Humours* muſt be evacuated by the *Semnate*, *Rhabarbarate*, and *ſweet Manna Purgers*, with *Acids* added, or the *Purging Waters*, which are *nitrous*, or *aluminous*, or *vitriolic*; theſe waſh and cool by their *Wateriſhneſs*, and precipitate the *Salt* by their *Stypticity*.

Hydragogues, which evacuate the *Serum*, abate the *Saltneſs*.

III. The *Salivation* by *Mercury* evacuates plentifully the *Salt Serum*, and *Æthyops Mineralis* and *Merc. dulcis* correct the *Saltneſs* by joyning with the *ſalſo-Acid* of the *Blood*; and all *Mercurials* depreſs the over-Fermentation of the *Blood* as much as *Chalybeates* exalt the low Fermentation.

IV. The *Salt Serum* is ſweat off by *ſalſo-acid* or *urinous Medicines*, and for the ſame end we uſe *Baths*, and much *Exerciſe*, the Decoctions of the *Acrid Woods*, and *Friction*s, and *Fontanels*.

V. *Diuretics* plentifully evacuate the *Salt Serum*; as all *Acid Diuretics*, and the *teſtaceous* and *bitter cichoraceous Plants*.

VI. The *Saltneſs* of the *Blood*, and the *Ferment* of the *Stomach*, the *acrid Bile*, or *ſplenetic*, *ſharp Acid*, or that of the *Stomach*, muſt be corrected, and the frequent *Ebullition*, *Circulation* or *Putrefaction* removed.

1. All *Acids* correct *volatile Salts* and *Oyls* which are *fœtid*, and all *Lixiviums* are made more *mild* by *Acids*.

2. The *mucilaginous Temper*, the *Acrimony* of *Salts*; as *Gum Tragacanth Powders*, Decoction of *Snails*, *Althæa Roots*, and *Emulſions*.

3. The *Saltneſs* may be diluted by a watery Diet or Medicines; as *thin Broths*, *Whey*, *Chalybeate Waters*, *Milk Diet*, and diſtilled *Milks*, *Watergruel*.

4. *Opiates* and *Styptics* ſtop the Motion of the *Blood*.

5. *Bleeding* evacuates the *Old Blood*, which is moſt *ſalt*; and the *New Blood*, which comes in its room, is more *freſh*, and leſs *ſalt*; ſo *Broths* of *Fleſh Meat* are *ſalter* by long boiling.

6. All *Extraneous Ferments* ought to be removed from the *Blood*; and by the *Cortex*, or other *Antifebriles*, the Fermentation muſt be ſtopped.

That the *Urin* contains an *Acidity* naturally in it, appears by the Correcting of *Coloquintida* by it, whoſe *Bitterneſs* is made near *inſipid* by it.

The

The *Purging Quality* in the *Coloquintida* is enervated by the *Urin*, as well as its *Bitterneſs*. Hence it appears, how great a Correcter of *Choler* the *Urin* may be, and how much it may preſerve the *Humours* from *Putrefaction*, as it preſerves *Ulcers* by its *ſalſo-Acid* Taſte.

A *Lixivium* of *Oyſter-ſhells* changes the *Bitterneſs* of the *Species* of the *Bitter Decoction* boiled in it into a *Sweetneſs*, and this therefore may be uſed to correct *Choleric Heart-burning* in the *Stomach*, and this may correct the *Bitterneſs*, as well as *Acidity* of *Humours*. But from this Experiment let our Preſcribers conſider, whether they do not abate the Vertue of the *Cortex*, by extracting it with a fixt *Salt*, ſince the Taſte of it is altered thereby.

I remember, a *Tincture* of *Wormwood* made with *Brandy*, and *Salt* of *Wormwood*, did not taſte very *bitter* by being made with a *fixt Salt*; but that made with *Spirit* of *Wine*, and a little *Oyl* of *Sulphur*, was very *bitter*; and in the *Vomitings* of our Patients we find both very *bitter*, and very *ſowre*, which did not correct each other, but a *fixt Salt* in this caſe may correct both *ſowre* and *bitter*.

CHAP.

CHAP. XIII.

Of the Vitriolic Acidity *of the* Blood.

IN the moſt *Healthful Blood*, we diſcern many Taſtes beſides a *Sweetneſs* and *Saltneſs*; a *vitriolic* or *chalybeate* Taſte is evident, therefore we cannot doubt of the *vitriolic Acidity* of the *Blood*, nor that it is produced from the *tartareous Acidity* of the *Chyle*, which, by Digeſtion, is exalted, and volatilized into a *ſulphureous Spirit*. The *Acid ſulphureous* fumes from the *Earth*, produce the *Tartar* in *Plants*, as it is mixt with *Earthy Parts*; but by the *Animal* Digeſtions, and Fermentations, and Precipitation by *Salts*, the *Acid* may recover its *Mineral* Nature, and appear to be a *vitriolic Acid* in the *Blood*, or elſe it may acquire that Savour by its Mixture with the *oyly*, *acid*, *fœtid Particles* of the *Blood*, which ſomewhat reſemble *Sulphur*.

This

This *vitriolic Acidity* was the Natural *Alimentary Melancholy* of the *Blood*, which the Ancient Phyſicians obſerved in it. They called it a *Black Humour*, which gave the *Blackneſs* to the *Blood*; for it is certain, that *Acids* turn the *Blood black*. They believed there was an Aſtriction in this *Humour* to bind the *Belly*; and it is plain, by the *vitriolic* Taſte, that it is capable of Binding the *Body*; for *Spirit* of *Vitriol* and *Vitriolum Martis* bind the *Body* by their *Stypticity*, though *tartar Acids* purge, and have not that effect, unleſs they be *acerb*. They believed it to be cooling and drying, becauſe of the cooling quality of *Vinegar*; and by being a great *Diuretic*, both *Vinegar* and the *vitriolic Acid* dry up or evacuate the *Succus Nutritius*. All *Melancholy* Perſons are great *Spitters*, and make too much *Urin*, and the *Ancients* called thoſe Conſtitutions *dry*, who had little of the *Succus Nutritius* in them to make the Habit of the *Body* plump, as it is in *Lean* Perſons, and the *Fat* more *moiſt Conſtitutions*.

They eſteemed this Natural *Melancholic Acidity* to be the *limous* or *ſlimy*, *fæculent* Part of the *Blood*, like to the *Lees* of *Wine*, and ſo compared it to the Element of *Earth*, for in all *Tartar* there is a great deal of *Earth*, which makes it to ſubſide in

in the *Wine*; and this *black Melancholic Acidity* colours the bottom of the *Blood* moſt, when it is cool in a Diſh.

This *Chalybeate* Taſte is in all *Blood*, and is Natural to it; part of it conſtitutes the *ſplenetic Humour*, when it is mixed with a *Slimineſs*, and it is ſeparated by its *Glands*, for the Uſe of the *Choler*, which is precipitated from the *Blood* by it. I boiled a a *freſh Spleen* of a *Hog*, which made a very *ſlimy* Decoction; I put ſome *Choler* to it, and they readily mixed together; and I thought it very probable, that the *Slimineſs* which makes *Choler ropy* was from the *Spleen:* This *vitriolic Acidity* may give a Conſiſtence to the *Blood:* It fixes its *Salts* and *Oyls*, by coagulating with them into a *ſalſo-acid* Taſte, and by that diſpoſes the *Serum* for its paſſage by the *Kidnies*.

I have deſcribed the *Tartar Acid* above, but here muſt conſider only the *vitriolic Acidity*, as an effect of too high a Digeſtion, or Fermentation of the *Humours*, and being in this State, the *Ancients* called it *Atra Bilis*, which is extreamly *hot*, *corroding*, *burning*, *exulcerating*, and being ſpilt upon the Earth, it ferments it like *Vinegar*, or *Aqua Fortis*, and excites *Bubbles*.

The Ancient Phyſicians reckon four Species of this *Atra Bilis*, but in reality there is

is but one, which is produced from the *vitriolic Acid* of the *Blood*, by a Fervor or Putrefaction of *Blood*, and the differences of the *Atra Bilis* are either from a Mixture of *Choler* with it, or *Blood*, or *Serum* of the *Blood*, or Corruption of ſome of our Diet in a *Surfeit*.

1. They attribute one Species of the *Atra Bilis* to the Exuſtion of *Choler*, which, in reality, is nothing but a Mixture of the *ſplenetic Acidity* too high digeſted with *ſharp Choler*, and this Mixture is either naturally made in the *Gall Bladder*, and *Hepatic Veſſels*, and the *Choler* is then obſerved to look *black* in the *Veſicâ Felleâ* upon Diſſection; or elſe, this *vitriolic Acidity* being pretty naturally evacuated into the *Stomach* and *Guts*, it there mixes with the *Choler*, and produces *black Vomits*, and *Stools black*, and this appears in the *black Jaundice* by the *black Colour* of the *Skin*, and in ſome *Fits* of the *Cholic*. *Generatio Atræ Bilis à nimio calore dependet, quia humores valde adurere ſolet*, was the Obſervation of *Sennertus*.

2. They attribute a ſecond Species to *putrid, burnt Blood*, which is only the high digeſted *vitriol Acid* of the *Blood*, mixed with *putrid Blood*, which is made very *black* by the *Acidity*, and this appears like *Pitch* or

or *Tar* when it is evacuated from ſome *Artery* in the *Stomach* in the *black Hypochondriac Vomitings*, or from the *Blood-Veſſels* in the *Piles*, or *bloody Stools*. The real *Atra Bilis* is diſtinguiſhed from this, becauſe it does not grow *thick*, as *Blood* being cold does. This Species gives a *Blackneſs* to the *Urin*, and if the *Blood* be taken from a *Vein*, the *black Fæces* ſubſide to the bottom of the Diſh, as this may be obſerved, for which reaſon I cauſe ſuch *Blood* to be taken in a Glaſs.

I have met with a remarkable Inſtance of this kind in a Gentleman, after a long Fit of the *Gout*; he was about Fifty Years Old, and always ſubject to *Pains*, and *Vomiting ill Humours* from his *Stomach*.

He Vomited a *black Serum* in great quantities: I gueſs four or five Gallons in a Weeks time; what came by *Stool* was *black*, as *Tar*; his *Blood* let out of the *Veins* of the *Arm* had a great *black Sediment*, like that he Vomited; the *Blood* taken away looked very *Sizie* or *Rheumatic*, and the *black Sediment* filled half the Glaſs, which was full of *Blood*; upon the *Humour* which was Vomited, I made the following Experiments.

The *black Serum* turned *reddiſh* with *Spirit* of *Harts-Horn*, and it had the ſame Colour

Colour from *Salt* of *Wormwood* mixed with it, whence it is evident, that this *black Serum* was originally *Blood*, the *red* Part being *blackened* by an *Acid*; this would not inſpiſſate by the *Fire*, and therefore was not pure *Serum*, neither did it contain much *Viſcidity* in it, for *Oyl* of *Vitriol* could not coagulate it, neither did it change its Colour, becauſe it was changed *black* before, to which *Acids* change the *Blood*; neither for the ſame reaſon did *Alum* coagulate it, or change its Colour, for *putrefied Humours* neither can be inſpiſſated by the *Fire*, or coagulated by *Acids*.

Sublimate alone coagulated it, and changed it into a *greyiſh* Colour.

Galls did not *blacken* the *Humour* more, but ſet to the *Fire* it turned *whitiſh*; and hence it appears, the *vitriolic Acid* of the *Blood* does not ſtrike a *Black* ſo great as common *Steel vitriols*.

Syrup of *Violets* mixt with the *black Serum* became *reddiſh*, as if an *Acid* were mixed with it; and from hence I collect, that ſome *Acid* was in that *black Humour*. I obſerved no Smell in that *Humour*, nor the Patient any Taſte, as he informed me.

I evacuated this *Humour*, being corrupt, by *ſmall Beer* plentifully drank, by which he Vomited plentifully, being Sick; and I

Purged

Purged him with *Sena* every Day, or gave *Glyſters*. When this *black Humour* ſtopt its Evacuation, he was very Sick, and it cauſed *Convulſions*.

I could not procure the opening of this Gentleman, when Dead, and ſo wanted an Information whether this *Humour* came from the *Arteries* of the *Stomach*, or the *Biledu&ts*.

3. The Third Species of *Atra Bilis* was attributed, by the *Ancients*, to the *Pituita Salſa*, which, by long Aduſtion, grew *corroſive*, and this ſeems only to be a *ſharp*, *fiery Salt* of the *Blood* mixed with the *vitriolic Acidity*, by which it is made a *black Serum* or *Sanies*, ſuch as in *cancerous*, or other *putrid Ulcers*.

4. The Fourth Species of *Atra Bilis* the *Ancients* make the *Natural Melancholy*, *burnt*, or *putrefied*, or *over-fermented*, and this is that I call moſt properly the *Atra Bilis*, which, by Mixtures, makes the ſeveral Species mentioned: and one more I find Authors have forgot, but I have met with it in my Practice, and that is the *Meats* that corrupt and putrefie in the *Stomachs* of thoſe who have that *Atra Bilis* in their *Bloods*, for this *blackens* the Vomits in ſuch Conſtitutions, and gives alſo *black Stools*; and this I lately obſerved in a Perſon very Healthful, of a good

good Stomach, but black Countenance; at first he Vomited *black*, and *bluish Humours* afterwards, but the *Stools* were all *black*, with *Fainting*, and *cold Sweats*.

I let this Patient *Blood*, but found no *Blackness* in it; so that these *black Serum Stools* were no Corruption of that; neither would *Spirit* of *Harts-Horn* turn this *Humour reddish*, as it did the *black Humour* which was produced from the *Blood*. I Purged him, but after some few *Stools* at first *black*, none of the last were so; and by Purging off the *Surfeit*, which was made by *stale Beer*, and *hanged Beef*, he recovered.

The Signs of the *vitriolic Humours* are chiefly the Evacuations of the *black Humour* by *Urin*, and *black Spittle* from the *Lungs*, like a *Spider's Web* over it in the *Asthmatic*, and *Splenetic*. The *Saliva* tastes *salso-Acid* in *Catarrhs*, *Ulcers* of the *Mouth* and *Gums*, and *Rottenness* of the *Teeth*. The *Mucus* of the *Larynx* being Coughed up causes *Consumptions*, *Spitting* of *Blood*, *Catarrhs*, and tastes *sweet*, *vitriolic*, like *Blood* it self.

The *slimy Lympha* of the *Stomach* being *vitriolic*, causes *Vomiting*, *Heart-burning*, or a great *Appetite*, *Hypochondriac Ructus*, and *Pains* of the *Stomach*.

The *Nervous Lympha* is *vitriolic* in *Melancholies*, which cauſes a *Fear* and *Sadneſs* without a manifeſt Cauſe, an implacable *Anger*, *Watchings*, or *Dreams* of *black things*, or *Devils*. Their *Motion* is *ſlow* and *grave*, their *Aſpect inconſtant*, *ſad*, and *frightful*.

The *ſerous* and *nutritious Lympha* is *ſalſo-acid* in the *Hypochondriac*, by which it is made unfit for Nouriſhment, for nothing nouriſhes but a *ſweet Humour*. The *Acidity* curdles the *Serum*, and that ſtops in the *conglobate Glands*, and breeds the *Scrophulæ*, and *ſchirrous Tumours* of the *Liver* and *Spleen*.

The *Urin* is *pale*, and plentiful in *Melancholy Conſtitutions*, and frequently full of a *Sediment*, which ſticks to the ſides of the Pot.

The *pale Urin* gives an *Acid Dyſuria* to be tempered by *Harts-Horn Spirit*, or *Steel*.

The *Blood*, the *Choler*, the *Serum*, and the *Juyces* of the *Stomach*, look *black* by the *Atra Bilis*.

The *Skin* appears *dry*, *hard*, *cool*, and *rough*. The Colour of the *Face* is *brown*, or *black*, or *lead* coloured, from the *Atra Bilis* mixed with the *ſuccus Nutritius*. The habit of the *Body* is *thin*, and *lean*, and the *Hair* is *black*, *hard*, and *curled*.

The

The *black Humour* is vomited, and purges downwards; the *Hæmorrhoids* ſwell, and break; there is much *Spitting*, but the *Belly* is *bound*; the *Urin* is *black*, *livid*, *thick*, but ſometimes *thin* and *white*; a *Cremor* ſwims on the *Urin* with much *farinaceous Sediment*.

The *Pulſe* is *ſlow* and *hard*.

Melancholy Diſtempers preceed; as *Quartans*, *Swelling* of the *Spleen*, *Leproſie*, *Varices* of the *Legs*, *Hæmorrhoids*, great *Voracity*, and little *Thirſt*, but *Acid Ructus*.

Their Parents were *Melancholy*. The Age betwixt Forty and Sixty, and a *vitriolic*, *natural* Temper of *Blood* and *Spirits*, and the *Autumn* diſpoſe to *Melancholy*.

The external evident Cauſes of the *Atra Bilis*, are,

1. A high fermenting Diet; as *old Cheeſe*. Fleſh-Meats which are ſtrong and blackiſh; as *Veniſon*, *Hare*, *Swines*, *Beef*, which abound with a *black Blood*; Birds feeding in Fens; as *Geeſe*, *Ducks*, *Woodcock*, *Snipes*, *Swans*, &c. by Drinking *Fen*, *Vitriolic Waters*, have both *black Blood* and *Fleſh*; *Fiſh* in Ponds, and *Sea-Fiſh*, which are called the *Cetacei*, *ſalted* or *dryed* in the *Smoak*, have a *ſalſo-acid* Taſte, and breed *Melancholy*: The Drinking of ſuch *boggy*, *vitriolic Waters* diſpoſe to *melancholical Humours*.

Strong Wines or *Drinks*, *fryed Meats*, and thoſe dryed in the *Smoke*, *Acrids* and *Aromatics* in our Diet, over-ferment the *Blood*; as *Faſting* does, and all produce an *Atra Bilis*.

The *ſalt Sea Air* fills the *Blood*, with the *Sulphur* fumes from it, and the *Fens* with *vitriolic*, *ſulphureous Exhalations*; for *vitriolic*, *blue Concretions* ſwim on ſuch *Waters*.

2. The *Melancholic Evacuations* ſtopt by the Suppreſſion of the *Hæmorrhoids*, or the *hepatic Flux* which is from the *Arteries* of the *Meſentery*, or the *Varices* vaniſhing, or the *ſtoppage* of *Sweat*, in a ſedentary Life.

3. By too much *Evacuation* of the *Spirits*, by *Watchings*, *Cares*, *Studies*, *Solicitude*, *Anger*, *Exerciſe*, the Motions of *Humours* are quickned, and the *Digeſtions* heightened, and the *Oyly Parts* of the *Humours* evaporated, and the *Vitriolic* remain, and prevail over all.

The inward Cauſes of the *vitriolic Acidity*.

1. A *black*, *vitriolic Humour* in *hot* and *dry Conſtitutions*, which makes the *Blood black*, and the Colour of the *Face* ſo too, and this is increaſed by being in a hot Region, or hot time of the Year, by *hot Diet*, or *violent Paſſions*, &c.

2. The

2. The Evaporation of the *oyly Spirits*; ſo *Vinegar* is prepared, when by the Heat of the *Sun*, or *Fire*, the *Spirits* are evaporated.

There is in the *Spirit* of *Wine* ſome *Acidity*, by which *Brandy* curdles *Milk*; and that there is ſuch an *Acidity* in *Animal Spirits* is probable, for the *Animal Spirits*, like that of *Wine*, are very inflammable, or a thin lucid Flame; and it appears, that ſome *Acid* makes *Oyls* more inflammable; for *Oyl* of *Turpentine*, and freſh *Aqua Fortis*, upon their Mixture, turn into a *Flame*. All the *Spirits* of *fermented Liquors* are *acid*, *oleous*, and are very *pungent* on the *Tongue* by their *Acid*; but if the *Oyl* be ſeparated, they taſte only *ſowre*, or *ſharp*, from their *Tartar*. After the ſame manner the *Spirits* of *Animals* are compounded of a *fœtid Oyl*, and *vitriolic Acid*; and the *ſpirituous* Parts of all *fermented Liquors* have the ſame Compoſition; and theſe being the moſt *volatile* Parts, muſt needs compoſe the *Spirits* of *Animals*, which are produced alſo by the *Fermentation* in the *Stomach*, and after are prepared by a *long Digeſtion*, or *Circulation* in the *Blood*; therefore, if the *Oyly* Part be evaporated by *violent Paſſions*, or *Diſeaſes*, the *Spirits* remain *vitriolic*, or like *Aqua Fortis* in the *Melancholy* and *Hyſteric*

Perſons; and this *Acidity* of the *Spirits* infects the *Blood*.

3. There is another way of Preparing *Vinegars* beſides the *Evaporation* of the *Spirits* mentioned, which is, by addition of a *new Ferment* to *Wines*; and by both theſe ways the *Blood* becomes *vitriolic*. I have mentioned the *Evaporation* of its *Oyly Spirits*; and now will deſcribe the *Ferments* which *ſowre* it.

The *Viſcera* filled with *putrid Humours*; as in the *Phthiſis*, *old Jaundices*, wherein the *Lungs* and *Liver* are ulcerated, ſend a *putrid Ferment* into the *Blood*, and theſe ferment the *Blood* into an *acetous* Temper.

So the *Natural Humours* long detained, as the *ſeminal Matter*, which is of a fermentative Nature, or by the *Hæmorrhoids* or *Menſes* retained, the *Blood* ſuffers an *Ebullition*, and it is not unuſual, that any *Aminal Humour* corrupted ſhould become a *Ferment*, as appears in the *Saliva* of a *Mad Dog*; and in all contagious Diſeaſes; as the *Itch*, *Pox*, and *malignant Fevers*, wherein the corrupt Humours ferment thoſe which they infect into the ſame preternatural State.

Burning Fevers are commonly the occaſion of the *Atra Bilis*, for they make the *Blood black* and *thick*; and *Peſtilential Fevers* have the ſame *black Humours* both in the *Skin*,

Skin, and ſometimes evacuate it by *Stools*, or *Vomiting*, or *Urin*.

Galen affirms, That all who evacuate *black* Humours in the *Plague* die; but thoſe who do not, have the *black mortified Blood* in the *Skin*, where it ſpots it; and he imputes this *Blackneſs* to the over-heating or *Aduſtion* of the *Blood*; and he imputes all *melancholy* Caſes to the ſame extraordinary *Aduſtion* of the *Blood*, γίνονται αἱ μελαγχολικαὶ νόσοι ἐκ συγκαύσεως αἵματος.

This *Atra Bilis* happens in *Hæmorrhagies*, where the *Fibers* of the *Blood* are *putrefied*, and *black* in the bottom of the Chirurgeon's Diſh.

The Ancient Phyſicians eſteemed the *Spleen* to be the place where the *Atra Bilis* is bred, which, in *old* and *hot Animals*, appears very *black*; but in *young ones*, or thoſe of a *cooler* Conſtitution, more *reddiſh*; for the *vitriolic Acid* is more ſtrongly digeſted, and becomes more *ſharp*, and blacks more in the *old* and *hot Animals*, than in the contrary. They thought the *Spleen* attracted ſuch a Humour as the *Lees* of *Wine*, or the *Amurca* of *Oyl*; and this is the *vitriolic Acidity* mentioned.

4. The *Obſtruction* of the *Spleen*, when *ſchirrous* or *inflamed*, obliges the *vitriolic Humour* to paſs through the *Arteries* into

the *Stomach*, and there it corrupts its *Ferment*, and changes all the *Maſs* of *Meat* towards an *Acidity*, like too much *ſowre Leaven* in our *Bread*; ſo that *Hyſterical* Perſons vomit a great deal of *acid Humours*, and ſo do the *Hypochondriacal*, and both eat too much, and have their *Bodies* too much bound. Or elſe the *vitriolic Acidity* paſſes through the *hepatic Artery* into the *Bile Veſſels*, and there, by fermenting with it, it produces thoſe *Fluxes* of *Choler* which happen in the *Cholera*, or *Cholics*, or *Diarrhæa's*, and the various Colours of them.

The Cure of the *Muriatic Acidity* of the *Chyle*, and the *Vitriolic* and *Armoniacal* of the *Blood* require,

1. The *Evacuation* of *Acidities* from the *Stomach* by *Vomits*, in *hyſteric* and *hypochondriac* Caſes, and the frequent gentle *Evacuation* by *Stools*, and keeping the *Body* open by *Lenitives* of *Sena*.

2. All the evident Cauſes mentioned muſt be avoided, eſpecially a *tartareous* or *muriatic Diet*. Moderate warm things agree well with them, but no very hot ones, nor no *ſtrong Purgers*. The *Diet* muſt *moiſten*, or be *thin* and *nouriſhing*, as well as a little warm. All *Paſſions*, *Studies* muſt be avoided.

3. The

3. The *muriatic* and *vitriolic Acidities* are naturally evacuated by *Urin* and *Sweat*, and therefore we uſe *Diuretics* and *Sudorifics*.

4. The *Secretion* of the *vitriolic Humour* through the *Spleen*, muſt be promoted by *Steel Medicines*, which reſemble its *vitriol* Taſte, and the abundant *Acidity* in the *Chyle* and *Blood* precipitated, as in the Cure of the *Tartar Acerbity*.

5. All *extraneous Ferments* are to be avoided, and *Humours* ſuppreſſed evacuated.

6. This *vitriolic Acidity* at laſt fixes the *Blood*, and makes it congeal, and then the *Digeſtives* mentioned in the Cure of a *low Fermentation* are neceſſary, which, by exagitating the *Oyly Parts* of the *Chyle* and *Blood*, give them a Predominancy over the *Acidity*.

7. The *high Fermentation* of *Humours* muſt be checked by the *Diet* and *Medicines* preſcribed in the Cure of *too high a Fermentation* of *Humours*.

When the *vitriolic Acidity* chiefly troubles and infects the *Blood*, it may be eſteemed the *cold Scurvy*; but when the *Nerves* are alſo affected by the *vitriolic Acidity* it produces the *Hypochondriac* Affections, and the *Spleen* is obſtructed alſo. It coagulates in the *Kidnies* with ſome *terrene Matter*, like

Lime-

Lime-Stone, and there produces all the *calculous Concretions*. The *Corroſiveneſs* of *Humours* depends much on too high a ſtate of the *vitriolic Acidity*; and the *ſplenetic Flatuoſities* on a violent *Agitation* or *Expanſion* of *Spirits*.

Firſt, Of the *vitriolic*, *oleous Scurvy*.

In this *Scurvy*, the *vitriolic Acidity* prevails over the *oyly Spirits*, and for that reaſon it produces many of the *Symptoms* attending a *low Fermentation* of *Blood*; for the *Blood* becomes *ropy*, *mucilaginous*, and *ſharply Acid*, by *too high a Fermentation* of a depauperated *chylous Blood*, naturally more *Acid* than *Oyly*; the *Urin* is *pale*, and a *ſalt Cremor* ſwims on it; there are no *Spots* in the *Skin*, but the *Spirits* are *weak*, unfit for Motion, whence the *Laſſitude* proceeds, or *Fainting*, *Palpitation of the Heart*, and *dull Pains*, and *Windineſs*, and the *Aſthma*, a *Streightneſs* of the *Breaſt*, a *wandering Fever*, with ſudden Changes of *Heat* and *Cold*; theſe are the ordinary Symptoms attending the *cold Scurvy*, which in reſpect of the *hot*, *oyly*, *vitriolic* State of *Blood* in the *hot Scurvy* mentioned above, it may be called the *cold Scurvy*, becauſe the *Blood* is more *poor*, and leſs *ſpirituous*; but this is alſo produced by an over-fermentation of ſuch kind

of

of *Blood*; and the *cold Symptoms* depend on the Greatneſs of the *vitriolic Acidity*, which coagulates the *Blood*, and fixes all the *volatile Salts* and *Oyls*, and that is the reaſon it muſt be cured as in the *tartareous Acidity*.

I. The *Acid* muſt be evacuated by *Aloetic Purgers*, *Fil. ex Ammoniac. Ruffi*, *Sumach*; or by *Semnates*, or thoſe of *black Hellebore*.

II. The *Fervour* of *Humours* may be diluted by the watery Liquors; as *Whey*, *ſtilled Milks*, *Aſſes Milk*, *Steel Waters*, *Wine* and *Water*. See the Cure of *too high a Fermentation*.

III. All *Acid* Liquors muſt be avoided; as *Wines*, *Cyder*, *Beer* that is *ſtale*; and all the evident Cauſes producing *Acidities*.

IV. The *Scorbutic Acidity* muſt be evacuated by *Urin*, and the *Digeſtion* of *Humours* raiſed.

1. By *Acrid* Plants; as *Scurvy-Graſs*, *Horſe-Radiſh*, *Water-Creſſes*, *Rocket*, *Lady-Smock*, *Muſtard-Seed*.
2. By *volatile* and *fixed Salts*.
3. By *Turpentine* Plants; as *Pine Tops*, and *Juniper-Berries* in *Drink*, *Gilead Balſam*.
4. By *bitters Acrid* of the *Wormwood* Claſs; as *Wormwood Wine*.

5. By

5. By the *acrid Aromatics*; as *Angelica Roots*, *Galanga*, *Zedoary*, *Contrayerva*, *Cardamoms*, *Orange Peels*, *Winter-bark*.
6. By the *Laurel*, *bitter Acrids*; as the *Bark* and *Seeds* of *Aſh*, *Decoction* of *Guajacum*, and the Uſe of the *Cortex*.
7. By the *fœtid*, *lamium Bitters*; as *Chamædrys*, *Marrubium*, *Wood-Sage*, *ground Ivy*, and *ground Pine*.
8. By the *leguminous Bitters*; as *Broom*.
9. By *nauſeous Bitters*; as *Gentian*, *Centaury*, *Buck-Bean*.
10. By the *corroſive Acrids*; as *Aaron*, *leſſer Celandine*, *Arſeſmart*, *Piperitis*.
11. *Chalybeates*, which are of leaſt heat; as *Vitriol Martis* made into *Pills* with *Gum Tragacanth*, or elſe diſſolved in *diſtilled Milks*.

Secondly, Of the *Hypochondriac Affection*. This ſeems to differ from the *cold Scurvy*, by being a higher degree of it. When the *vitriolic Acidity* has ſo far coagulated the *Blood*, as to produce many *Obſtructions* in the *Viſcera*, eſpecially in the *Spleen*, whence the abundant *vitriolic Humour* is thrown upon the *Stomach*, where it produces *Corrugations*, and *Pains*, and *Inflations*, a great *Appetite*, and continual *Windineſs*, and *Vomiting*; after the *Meat* the *Face* is *red*, and

and the *Hands burn*, the *Countenance* is *black*, and the *Habit* of the *Body lean.*

When the *Vitriolic Humour* affects the *Brain*, it produces *Vertigo's*, *various Fancies*, *Head-Aches*, *Convulſions*, *Palſies*, *Alterations* of the *Pulſe*, *Oppreſſions*, *Trembling*, and *Palpitation* of the *Heart*, *Conſtriction* of the *Breaſt*, a Senſe of *Formication*, and *Stupor* in the *extream Parts.*

The *Urin* is various, commonly *turbid*, and *thick*, or *blackiſh*, with *ſandy*, *red Sediment.*

The *Belly* is *bound*, and the *Stools* frequently *black.*

A *thin Urin* preceeds ſome *Fits.*

I am not ſingular in my Opinion, that the *Acid* of *melancholic Blood* is *Vitriolic*; but can quote a remarkable part of *Sennertus*, where he ſays, *Atram Bilem ipſamq; melancholiam vitriolatæ naturæ participem, aut certe ei cognatam eſſe, & ferrugenei quid ſapere, nemo facile negaverit.*

This *Affection* happens about the Thirtieth Year of our Ages, and then the *Blood* ſeems to be at its higheſt Digeſtion; but by Accidents acquiring a great *Ebullition*, it loſes its *Spirits.*

Thoſe Conſtitutions in whom much *ſoure Ructus* and *phlegmatic Vomits* are obſerved, beat the *hotter Medicines*; and thoſe who have

have *choleric Vomits* burning in the *Hypochondria*, and *Thirſt*, and *Fury* in the *Spirits*, require the *cooleſt Medicines*.

Sweet things ferment, and are offenſive to the *Hypochondriac* and *Hyſteric*, which was anciently obſerved.

Τοῖς Σπληνικοῖς τὰ μὲν ἁρμὰ καὶ τὰ πικρὰ ἀφέλιμα, τὰ δὲ γλυκέα βλαβερά.

The Cure requires,

I The avoiding of a *Tartareous Diet*, and that which is *Muriatic*, and *Vinous*; to avoid *Paſſions*, *Studies*, too much *Solicitude*, and *Labour*, and to help all *Evacuations* ſtopt, eſpecially that of the *Hæmorrhoids*.

II. The *Saburra pituitous*, *tartareous*, or *bilious*, muſt be evacuated often by *Vomits*, and the *Body* kept open by *Aloetics*, and *Sennate Medicines*, or *Wines*, and *Clyſters*, or *Purging Waters*, and a *Pill* of *Ammoniacum* once a Week.

III. Frequent *Bleeding* ſmall quantities checks the *preternatural Fermentation*, and keeps the *Humours* from *Stagnation* and *Obſtructions*, eſpecially the opening the *Hæmorrhoids*, procuring the *Menſes*, and giving way to the *varicous Swellings* in the *Legs*, without binding them. *Bleeding* at the *Noſe* does good.

IV. In the *cold Melancholy* we uſe *hot Digeſtives*; as,

1. *Acrids.*
2. *Cauſticks.*
3. *Bitters*; *Elixir Antiſcorbuticum*, *Tinct. Sacra.*
4. The *Salts volatile*; as *Sal volatile oleoſum*, *Sal Abſynthii*, *Cochleariæ*, and *teſtaceous Medicines.*
5. The *Aromatics*, all which are mentioned in the *cold Scurvy.*
6. The *Chalybeates*, which are moſt *Sulphureous*; as *Chalybs cum Sulph. præp.* and the *Filings.*

V. In the *hotter Conſtitutions* all *ſtrong Drinks* and *hot Medicines* are offenſive, and theſe require,

1. *Watery Liquors* and *Medicines*, according to the Obſervation; *Melancholici non diutius curantur, quam humectantur*; and for this end they uſe *Whey*, and *Syrup* of *Violets* in all *black Humours*, and *cool Clyſters* to evacuate it. We uſe *diſtilled Milks*, *Mineral Waters*, &c. *Wine* and *Water* to *cool* and *moiſten.*
2. *Cichoraceous Bitters*; as *Decoct.* of *Dandelion*, *Conſerve* of *Cichory Flowers* and *Roots*, *Decoct.* of *Scorzonera.*
3. The *mucilaginous Bugloſs*, *Borrage Leaves*, and *Flowers*, *Syr. Borraginis*, *de Pomis citri.*

4. *Sub-*

4. *Sub-acid*; as *Juyce* of *Limons*, *Citrons*, *Syr. de Pomis*, which *Syrups* are good in *Whey*, and *Spirit* of *Alum* to fix *furious Spirits*; but *Vinegar* is injurious to the *Melancholic*.

5. The *Fern Styptics*; as *Polypody*, *Spleenwort*, *Ceterach*, these ſtop the *Fermentation* of *Humours*. Boil them in *Whey*, or *ſmall Ale*, with *Antiſcorbutics*.

VI. The *vitious Acidity* of the *Spirits* muſt be corrected by,

1. *Aromatic Cephalics*; as *Penny-Royal*, *Thyme*, *Sage*, *Bettony*, *Lavender*, the *Spirit* of *Lavender*.

2. By *Cardiac*, *Odoriferous Medicines* of *Ambergreaſe*.

Lozenges made of *Species* of *Diamber*, or *Lætificans Galeni* with *Oyl* of *Cinnamon*.

Cubebs candied with *Sugar* are good for the *Vertiginous*.

Some *Tincture* of *Aromatics* with *Ambergreaſe*.

3. *Teſtaceous Medicines*, and *Powders* of *Antimony*, *Steel*, *Cinnabar Mercury*, *Lapis Lazuli* with *Purgers*.

4. *Narcotics*. *Diaſcordium*, and *Confect. Alchermes* with *Laudanum*.

Fomen-

Fomentations to the *Hypochondria*, with proper *Oyntments*; for *Schirrus* of the *Viſcera*, *Baths* of *warm Water* are much commended; an *Iſſue* betwixt the firſt and ſecond *Vertebra* of the *Neck* or *Shoulders*.

The beſt Diet for *Hypochondriac Affection* is, freſh *Fleſh-Meats*, and *ſmall Ale*, with *Pine-tops*, *Dock-Roots*, and other *Antiſcorbutics*.

VII. *Anti-ſplenetics*, which open the *Obſtructions* of the *Spleen*; for the *Secretion* of the *vitriolic* and *viſcid Humours* from the *Blood* are abſolutely neceſſary; for the *Hypochondriac Winds* are to be cured by vomiting up the *corrupt*, *ſowre Ferments*, by diverting the *ſplenetic Humour* from the *Stomach*, and keeping the *Body* open by *Aloetics*, *Tinct. Sacra*, *Pil. Ammoniacum*.

We uſe *hot Medicines* in *Hypochondriac* Caſes, becauſe of the *Obſtructions* by *viſcid Humours*, and the evaporated *Spirits* muſt be ſupplyed by *ſpirituous Medicines*; and in all long *chronical Diſeaſes* a decay happens in our Digeſtions, for want of *Spirits*, and a *crude Saburra* of *Humours* is produced, though the original Diſtemper proceeded from a *hot* Cauſe, that is an over-Fermentation of *Blood*.

Thirdly, Of the *Concretion* of *Stones* or *Sand* in the *Humours* of an *Animal*.

The *Urin* contains three parts.

1. The *viſcid Particles* of the *Succus Nutritius*, which make its *Contents*.

2. The *ſalſo-acid* and *oyly Particles*, which give the *ſalſo-acid* or *bitteriſh* Taſte to the *Sweat* and *Urin*.

3. The *thin*, *ſerous*, *watery* Part, which carries all the other Parts and dilutes them.

When the *oyly* Part of the *Urin*, which I ſuppoſe to be the *Choler*, is too high digeſted, it looks *red*, and *flame* coloured, or deep *yellow*. The *red* Part of the *Blood* ſeems, in ſome *hot Bloods*, to colour the *Sediment red*.

When the *vitriolic Acid* abounds, it joyns its ſelf with ſuch *Earthy Particles* as are obſerved in all *Liquors*, (for *Lime-Stone Particles* may be obſerved in all *Waters*, but moſt plentifully in the *Purging ones*) and that, with theſe *ſtoney Particles*, coagulates into *Sand* or *Stones*.

The ſame *vitriolic Acid* coagulates the *Lympha's* into *tophaceous* or *cretaceous Stones* in the *Joynts*, and *Limbs*, and *Lungs*: Not only the *milky Lympha's*, but the *ſerous*, are ſubject to this Coagulation, as appears by the *Stones* in their ſeveral *Glands*.

If

If the *Salts* of the *Blood* were only coagulated by this *vitriolic Acidity*, they would not appear in any firm *tenaceous Conſiſtence* in the *Stone*; but all *Stones* would be friable, like *Tartar*, therefore this *Acid* coagulates ſome *viſcid Parts* with the *ſaline*. If there were no *Earthy Parts*, then the *Stones* would appear *gummy*, or *tenaceous* only, and not *ſolid*.

Stones are generally bred like *Tartar*, which conſiſts of the *Acid* Part of the *Wine* joyned to the *Earthy*, and mixed with the *ſlimy Fæces* into a *hard*, *Stony* Subſtance: ſo from the *Tartar* of *Vegetables*, coagulate with *ſtony Particles*, the *Stones* and *hard Caſes* of their *Fruits* and *Seeds* are produced.

The evident Cauſes of the *Stone*, are,

1. A *hot*, *acrid* and *aromatic Diet*, and a *muriatic Diet*, which over-ferment the *Blood*, and ſupply a *ſalſo-acid Matter* for the *Stone*, or a *viſcid*, as all Diet of that kind.

2. *Strong Diuretics* force the *ſalſo-Acid* to the *Kidnies* too much, if uſed too oft, or mixed with our Diet.

3. Too much *Venery*, *Baths*, *Paſſion*, *Flannel*, or *hot Cloaths* on the Back, or *ſoft Beds*, *lying on the Back*, *Exerciſe after Meat*, *much Riding*; all theſe weaken the *Kidnies*, by *Heating* them, or forceing the *calculous ſalſo-Acid* thither.

The inward Cauſes, are,

1. A *rancid, viſcous Chyle* from *hard Drinking ſtrong Liquors.*

2. A *Saltneſs* of *Blood*, and a *bilious* Temper.

3. A *vitriolic Acidity* of the *Spleen.*

4. *Narrow Pores*, or *Canals* in the *Kidnies.*

5. Such a Conformation of *Pores*, or Temper of *Humours*, may be derived from the Parents, and Children have *Stones* bred in them before they are Born, for the ſame reaſon; and becauſe they retain their *Urin* ſo long in their *Urinary Veſſels*, whilſt *Embryo's.*

The *Stone* is often bred from the *Nurſes Milk.*

The Cure of the *Stone* conſiſts,

I. In evacuating and correcting the *rancid Chyle*, the *Saltneſs* and *Viſcidity* of *Blood*, and the *vitriolic Acidity*, as is above-directed, and evacuating the *calculous Serum* by *Diuretics.*

II. In making the *Paſſages ſlippery*,

1. By *Vomiting*, with *Poſſet-Drink*, in which *Althea Roots* are boiled in the beginning of *Fits.*

2. By a *mucilaginous Glyſter*, and *Bolus* of *Caſſia.*

3. By

3. By *Emollients*, *Baths*, or *Fomentations*; as *Crocus*, *Mallows* and *Pellitory* fryed with *Butter*, and applyed. By *Emollient Plaſters* and *Oyntments*, *Empl. Melilot.*
4. *Oyly* Medicines; as *Oyl* of *Sweet Almonds*, and *Sperma Ceti*; an *Oyly Glyſter*, *Oyly Emulſions*, *Butter* and *Sugar*, or *Milk* half churned.
5. *Watery* Liquors force it; as *diſtilled Waters* with *Diuretics*, *Whey*, *Milk* and *Water*, *Aſſes Milk*, *Mead*, *Poſſet-Drink* with *Chamomile Flowers*, *Pellitory* and *Mallows*, *Chalybeate Waters*, and *Water* diſtilled from *Birch Juyce* and *Daucus Seeds.*
6. *Vomits*, *Sneezing*, *Leaping*, *Standing on the Head*, and *Cupping-Glaſſes*, *Riding*, *Stroaking* the *Loins* and *Belly*, or *Cupping-Glaſſes*, help to remove the *Stone*; and *Bleeding* in the *Arm* or *Foot*, and *Purging*, to which *Laudanum* muſt be added.
7. *Narcotics* allay the Pain.
8. The *Glyſters* may be made deterging; as of *Turpentine*, *Urin*, and *Purgers*; or *Carminatives* and *Diuretics*, with *Soap* and *Oyls.*

The Preſervation from the *Concretions* of *Stones* requires,

1. *Vomiting* and *Cholagogues*, *Purging Waters*, or *Purging Antiſcorbutic Diet Drinks*; or *Purging* once a Month.

2. The *falſo-acid* or *vitriolic Blood* is corrected by *Chalybeate* or *Bath Waters*, *Aſſes Milk* drank, diſtilled *Milk*, *Oat Mault*.

Whey with *Antiſcorbutics*, *Water* drinking, a *Toaſt* and *Water*, and *Nutmeg*, every Morning faſting; or *Antiſcorbutic*, *cooling Juyces*, *Emulſions*, *Strawberry Water*.

3. The *vitriolic Acid* requires temperate *Chalybeates*, *Teſtaceous*, *Salts volatile* and *fixed*, *Tinct. Antimonii*, *Tartari*.

4. The Uſe of *Vulneraries* which deterge; as *Veronica*, *Strawberry Roots*, *Virga Aurea*, *Hypericon*, *Milleſoyl*, *ground Ivy*, *Pine Tops*, *Ceterach* boiled in *Beer* or *Water*, to which *Honey* and *White-Wine* muſt be added, and *Lucatellus's Balſam* taken at Night, or *Turpentine Pills* with *Bole cum Maſtich*, or *Rhubarb*. A Plate of *Lead* muſt be worn on the *Back*.

The *Stone* in the *Bladder* muſt be cured,

1. By *Diuretics*, if the *Stone* be ſmall, and can paſs; as by the *Acrids* or *Cauſtics*, as *Water* diſtilled from *Caicus*, or the *Powder* of *Millepedes* ℈i.

2. By *Lixiviums*.

3. By *Cutting*: if the *Stone* cannot paſs the *chalybeate Waters* do Injury in ſuch a caſe,

caſe, and the palliative Cure requires the Evacuating the *calculous Matter* which increaſes it; the allaying the *Pain* and *Strangury* by *gum* and *mucilaginous* Medicines; as *Comfrey Roots*, *Milk* and *Water*, *Emulſions*, and *Aſſes Milk*, and *Narcotics*, and *Vulneraries*.

Fourthly, Of the *Hypochondriac Flatulencies* ariſing from too high a *Fermentation* of *Humours*.

Windineſs is an extraordinary Complaint in all *Hypochondriacal* Caſes, which ariſes either *Symptomatically*, from the *Obſtruction*, *Schirrus*, or *Inflammations* and *Impoſthumations* of ſome of the *Viſcera*; or elſe it depends on ſome *viſcid*, *ſowre Phlegm* lodged in the *Stomach*; or ſome *putrid Humour* which ferments the new *Maſs* of *Meat* into continual *Eructions*, which taſte either *hot*, *burning*, *broyling*, *fat*, *fœtid*, or very *ſharp*, *ſowre*, according as the *Ferment* of the *Stomach* is tinctured, either with too much *bitter Choler*, *ſalt Serum*, or the *vitriolic Spleen Juyce*, which is alſo *viſcid*, and thrown upon the *Stomach*.

The Cure of this *Flatuoſity* requires the Evacuation of the *flatulent Maſs*, and the *vitiated Ferment*, and afterwards the *Humour* that tinctures it muſt be carried off

by thoſe *Glands*, which are made for its *Secretion*. We muſt, laſtly, uſe thoſe *cooling Alteratives* which are preſcribed in the over-fermentation of *Humours*. This is the *Flatulency* properly of the *Chyle* over-fermented; but the ſecond Species of *hot Flatulencies* is from too great a Rarefaction or Expanſion of the *Spirits* in the *Maſs* of *Blood*; and ſuch a Fret of the *Spirits* we obſerve in all *vinous Liquors*, when they are kept too *hot*; for then thoſe Liquors are very *windy*, and taſte *hot*, and *froth* much. Such is the Temper of the *natural Spirits* of the *Blood*, when it is apt to *febrile Effervescences* upon very ſlight occaſions, in *Hyſterical*, *Hypochondriacal*, or *Scorbutic* Perſons, who are ſenſible of ſudden Alterations of *Heat* and *Chilneſs*; and I have obſerved in a *Scorbutic* perſon, a ſudden *Tumour* riſing in the *Fleſh*, which would immediately ſubſide again. This *flatulent Effervescence* of *Spirits* muſt be cured as an *Ephemera*, removing the Occaſion, and tempering the Humours by *Acids*, *Acerbs*, *Mucilages*, and *Opiates*, as will hereafter be deſcribed, and the Diſpoſition to this *Flatulency* will be removed by a long uſe of the *Cortex*, and thoſe *cooling Alteratives* which depreſs *too high a Fermentation*.

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There is a third kind of *hot Flatulency*, which happens in the *Nerves*, who receive their *flatulent Spirits* from the *Blood*.

In the *Nerves*, the *Spirits* being rarefied or expanded, produce the *Aſthma*, of which I ſhall particularly treat; or the *Tympany*, *Cramps*, and *running Pains*.

Poyſons tumifie the *Body*, by rarefying the *Spirits*; and ſome who die of *Convulſions* are prodigiouſly *ſwell'd*; thoſe who die of the *Iliac-Paſſion* have their *Bellies* much *ſwelled*.

This *Nervine Flatulency* requires the ſame Method for Curing the *Inflammation* of the *Spirits*, as in an *Ephemera*; and alſo the ſame Method for preventing any new fit of *Windineſs* in the *Nerves*, as is mentioned above; for the *Natural* and *Animal Spirits* differ not in Nature; for what is in the *Blood* now, after a ſmall time is carried through the *Nerves*, and ſo returns into the *Blood* again.

The *Ferment* producing *hot Flatulencies*, was eſteemed, by the Ancient Writers, to be, *Humores aduſtos, atrabilarios, acidos inſtar fermenti ſeſe habentes*, as *Sennertus* deſcribes it; and of this Opinion was *Diocles*, *Caryſtius*; for which he quotes *Galen*'s Third Book, *de Locis affectis*.

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The *crude Flatulencies* are produced by a *weak Heat*, as they called it; that is, a *low*, *crude Ferment*, which does not thoroughly ferment the *Meat*, and that is either *ſerous*, or a *viſcid Slime* in the *Stomach*, or *tartareous Acidities*; but in all *hot Flatulencies*, the *Ferment* producing the *Flatulencies* is either *bilious*, *ſaline*, *vitriolic*, or *putrid*. Some *Flatulencies* are imputed to the Contrarieties of *Humours*; as that which is produced by *fixt Salt*, or *Alcali*, and *acid Spirits*, ſuch may be obſerved in the *Guts*, betwixt *acid Meats*, and *acrid Choler*, which produce the *nitrous Flatulency*.

Theſe following *Flatulencies* are not produced by a *weak Heat* or *Fermentation*, but by *aduſt Humours*; that is, an over-fermentation, as the *Flatus* in a *hot Cholic* are from *Inflammation* of the *Guts*.

The *Tympany* depends on a *hot Flatulency* rather than on a *cold*, or *low Fermentation*.

The *Hypochondriac Affection* is accompanied with ſo much *Flatulency*, that it is called, πνευματωσις, and depends on too high a Fermentation, and the *Blood* is too *thick*, and *hot*, and the *Spirits inflamed*.

Theſe are *Flatulencies* depending on the *hot Ferments* mentioned; and theſe produce it from any kind of *Meat* taken; but there is a different *Flatulency* ariſing from the *hot*

Spirits

Spirits lodged in ſome kind of *Meats*; as in *Poyſons*, *Garlic*, and many *oyly Fruits*, and *fryed Meats*, and all other Diet which turns *nidorus* on the *Stomach*.

Any *Animal Humour* kept to putrefie, as the *Serum* of the *Blood* long bottled, becomes *flatulent*; *Putrefaction*, in all *Tumours* ripened, *ſwells* them; by which it appears, that all *Windineſs* is an effect of ſome preternatural *Ferment*, either too *ſtrong* or *weak*, or mixt with other *Humours*, by which it preternaturally ferments them; for when the *ſtomachic Ferment* does its Office well, no *Ructus* are produced; and from hence it appears, that the *windy Fumes* or *Vapours* are nothing but the *natural Spirits* of our *Humours* ill fermented; and theſe coming into the *Nerves*, produce what we deſcribe by *Vapours* in the *hypochondriac* and *hyſteric* Caſes; for all ſorts of *Convulſions*, as *Epilepſies*, *hyſteric* and *hypochondriac Fits*, *Vertigo*, the *Palpitation* of the *Heart*, *Singultus*, *Chorea Sancti Viti*, depend on the *higheſt* and *hotteſt Flatulency* of our *Spirits*; but the *Tympanites*, *Aſthma*, *Incubus*, are different from the former, as much as a gradual *Elaſticity* or *Expanſion* of the *gentle Air* does from a *violent Blaſt* or *Storm*. I will here annex a ſtrange Account of a *Priapiſmus*, from *Windineſs*, firſt premiſing, that it is

no

no effect of a *Venereal Diſtemper*, nor a *Melancholic Fancy*. The Perſon is of a middle Age, and fat habit of Body, who every Night has a *Priapiſm* in his Sleep, *cum emiſſione Seminis*; it never ſeizes him but in his Sleep at Night, and never in the Day-time, though he ſleep then. This *painful Erection* he imputes wholly to *Windineſs*, and thus he deſcribes it; I often plainly and loudly hear the *Wind* to make a Noiſe in that part, like that of the *Guts*, eſpecially in a Morning; for, conſtantly, as ſoon as I wake, the *Wind* begins to return from that part, and in going back is very audible for near a quarter of an hour, till the Part is fully fall'n; and ſometime when it is returning I find a *Pain*, and Fulneſs enſues in my Breaſt; and, at the ſame time, I have conſtantly a Noiſe and Piping in my Ears. He bled in the *Penis* without any Benefit; and drank *chalybeate Waters* without any great Succeſs, and uſed *Steel* and *Nervines*, *Fomentations* and *Unguents*.

The Medicines againſt a *Priapiſm*, above the *hot Flatulencies*, are *nitrous Medicines*, *Spirit* of *Niter*, *Emulſions*, *Acids*, *Narcotics* externally and internally, *Bath Waters*, *Chalybeate Waters*. The *hot Carminatives* are *Camphire*, *Rheu*, *Cummin Seeds*, *Species Diambræ*, *Agnus Caſtus Seed*, and *Hemp Seed*. *Glyſters* do more than *Purges*. The

The *Indications* in the Cure of the *hot, fœtid Flatulencies*, are,

I. To evacuate by *Vomits*, or *gentle Purges*, or *Glyſters*, the *nidorous*, *Acid*, *bitter Salt*, or *fœtid Maſs* from the *Stomach*, and by frequent *Purges* to divert thoſe *Humours* from thence, which give an ill Tincture to the *Ferment* of the *Stomach*. *Cholagogues* and all the *ſpecific Purgers* are here proper, *Purging Waters* eſpecially.

II. To correct the *cholerick*, *ſalt*, *vitriolic* or *putrefactive* State of the *Blood*, which infects the *ſtomachic Ferment*; and for this we muſt uſe thoſe Alteratives which are preſcribed for each *Cacochymia*.

III. All the *hot Flatulencies* of *Humours* muſt be depreſſed, by fixing the *fermenting Spirits*.

1. By *Acids*, *Sp. Nitri dulcis*, *Salis dulcis*, *Succi Citri*, *Ribium*, *Decoct. Tamarind.* *Elixir Vitrioli*, *Elixir Proprietat. cum Acido*, *Crem. Tartari*, *Spirit* of *Vinegar*. ℞ *Aq. Menth. Simp. Fl. Chamomeli*, *Fœniculi. an.* ℥iv. *Sp. Carui* ℥iſs. *Sp. Aceti* ℥i. *ocul. Canc. vel Antimonii Diaph.* ℈i. *Syr. Corticis Aurant.* ℥i. *Laud.* gr. iij.

Gas. Sulphuris, *Cochi cum Aq. Paratæ Hauſtu.*

2. By

2. By *Salso-Acids*.

Acids mixt with *Volatiles*, *Mixtura Simplex*.

Sp. Carminans Secretus ex Tartaro & Nitro.

Sal Prunellæ, *Sal Armoniac*, and all *nitrous Medicines*; *Sal Succini*.

3. By *watery* Liquors; as *Aq. Parata*, distilled *Waters*, drinking *Wine*, and two parts of *Water*, or *Wood-Drinks*, *Spaw-Waters*, *Milk* and *Water* in *salt Cacochymia's*, the *Bath Waters* inwardly, but outwardly they increase all *hot Flatulencies*. *Cold Water* is more useful, or *Vinegar* and *Water*, dipping or immersion in *cold Water*, *Solutions* of *Niter*, and *Sal Armoniac*.

The *cool Juyces* of *Plants*; as *Sempervivum*, *Purslain*, *Brook-Lime*, *Plantain*, and *Raw Fruits*, cool such *flatulent Bloods*.

But since all the *hot Flatulencies* procure a decay of *Spirits*, the *Fermentation* becomes at length depressed; and as in all *chronical Diseases* a *Saburra* is produced, which requires Digestives of the cooler kind to renew the *Fermentation* of the *Blood*, and depurate it from some *secretitious Humour* suppressed. As,

1. The *cool Chalybeates*; as *Vitriolum Martis*, *Chalybs Willisianus* in *Milk Waters*.

2. The

2. The wild *aromatic Carminatives*, and gentler *Bitters*; as *Chamomile Flowers*, *Zedoary*, *Angelica*, *Orange Peels*.

3. The Uſe of a moderate Diet, in which there is little *Slime*, or *acrid Parts*, eſpecially *Liquors* in which no *ſpirituous Parts* are, and which are not apt to ferment.

The *Nervine*, *hot Flatulencies* cannot be compoſed without *Opiates*, which weaken the *Elaſticity* of the *Spirits*. All *hot Nervines*, as *Caſtor*, the *hot Gums*, *Aſſa*, *Galbanum*, and all *Amber Medicines*, increaſe the *hot Flatulencies*, and alſo all *Chymical Oyls*, *Balſams*, and all *Salts*, whether *volatile* or *fixed*, and alſo all hot Applications outwardly; but the cool Medicines mentioned above, which cool and temper the *ſanguineous Spirits*, have the ſame effect upon the *Animal*, or *Succus Nervoſus*.

It often happens that there is a *cool Flatulency* depending on a *weak Digeſtion* in the *Stomach*, when a *hot Flatulency* infects the *Blood* and *Nerves*, as in the *Aſthma*, *Tympany*, *Hypochondriac* and *Hyſteric* Caſes, and then the Medicines muſt be mixed, and of a middle temper, neither too *hot*, nor too *cold*.

℞ *Aq. Menth. Fenicul. an* ℥iij. *Sp. Carminativ. Sylvii* ℥iſs. *Sp. Nitri* gr. xx. *Ol. Juniperi* gr. vi. *Syr. Cort. Aurant.* ℥iſs. *Laud.* gr. iij. *Capiat cochleat.*

Fifthly,

Fifthly, Of the *Corrosiveness* of the *Humours*.

When *Humours* are *corrosive* they produce *Pains*, *Burning*, *Ulcers*, *Rottenness* of the *Bones* and *Teeth*, and *Fluxes* of the *Belly*, or *Hæmorrhagies*, and a *thin*, *fœtid Sanies* in ulcerated Parts.

1. A *corrosive Acidity* in the *Stomach* and *Belly* produces the *Pain* and *Heart-burning* in the *Stomach*, a *Cholera*, or *Cholick*, or *Dysentery*, or *Boulimia*, and *Ulcers*.

2. A *corrosive* Temper of the *Spittle* corrodes the *Teeth* and *Gums*, and occasions *sharp Catarrhs*. The *corrosive* Temper of the *Mucus* of the *Aspera Arteria* produces a *Phthisis*, *Spitting* of *Blood*; and the *corrosive* Temper of the *Mucus* of the *Nose* an *Ozena*.

3. A *corrosive Acrimony* in the *Seminal Lympha* produces *Salacity*, *Gonorrhœa Simplex*, and *Fluor Albus*, if with *Pain* and *Corrosion*.

4. The *Corrosiveness* of the *Lympha Nervosa* is made evident by *wandring*, *corroding Pains* of the *Head*, and *Limbs* in the *Scurvy*, and *Lues Venerea*, and in *Convulsions*, or *Cramps*, and *Melancholies*.

5. The *Humours* of the *Eyes* have a *salso-acid Corrosiveness*, which inflames and ulcerates them.

6. The

6. The *Milk* in *Womens Breaſts* acquires a *corroſive Acidity*, which produces *cancrous* or *ſchirrous Tumours*.

7. The *Blood* has a *corroſive Saltneſs* in the *Scurvy* and *Hæmorrhagies*.

8. The *ſalt Serum* and the *Lympha ſeroſa* have a *muriatic Corroſiveneſs*, which corrodes the *Fleſh*, and hinders the *Nouriſhment*.

9. The *Urin* is corroſive in the *Strangury*.

10. The *Bile* is corroſive in *Diarrhæa's*.

11. The *Spleen-Acid* is corroſive in *Melancholies*.

The external Cauſes of *Corroſiveneſs*, are,

1. *Sharp*, *corroſive* Diet, of *ſharp*, *ſtale Beer*, and *ſalt Meats*, and *ſmoaked*, *dryed Meats*, *burning Brandy Spirits*, and *ſharp*, *acid Wines*.

2. *Violent Paſſions*, *Sadneſs*, *Anger*, *Anxiety*, and *Watching*, *Studies*.

3. *Immoderate Labour*, and *Venery*.

4. Suppreſſion of *ſharp Humours* uſually evacuated.

The internal Cauſes.

1. The *Ebullition*, or *high Fermentation* of *Humours*, which ſtands next to the *putrefied State*; for whether the *corroſive Acrimony* be *vitriolic*, *ſaline*, or *muriatic*, which is a Mixture of both; it depends on a violent, immoderate *Fermentation* of *Humours*. As the natural *Acidity*, *Saltneſs*, and *muriatic*

or *armoniac ſalſo-Acid* depends upon a natural and moderate *Fermentation* of *Humours*.

Corroſive, Acid Spirits are prepared by *Chymiſts*, with an extraordinary degree of the *Fire*; and ſo are the *ſalt, acrid, pungent Acrimonies*, as that of *volatile Salts*, which taſte *fiery, burning, ſalt*, and *pungent*. There is a *burning Acid* in *Oyl* of *Vitriol*, in which the *Acid* is combined with *Sulphur*, and *fiery Particles*.

The *Chymiſts* prepare another *corroſive* kind of *Medicines* from an *Acid* and *Metal*, which mix in a *cutting, tearing Texture*, ſuch as is that in the *Cryſtals* of *Silver*, and *Sublimate*.

In the *tithymalline, corroſive Plants* there is a *Milky Juyce* made of the *Oyl* and *Acid*, both which are very *volatile*.

In *Minerals* there is a natural *corroſive Texture* in *Arſenick*; which contains a Mixture of *Sulphur* and *ſharp Acid*.

Whatſoever *corroſive Qualities* our *Nouriſhment* can acquire by *Diſtillation* by a *ſtrong Fire*, the ſame may be produced by *Fermentation*, and *Digeſtion* in the *Humours*, when they are *over-digeſted*.

From *Animals*, a *volatile, fiery Salt* may be produced, and by that the *Chyle* and *Blood*, and all their *ſecretitious Humours* are made *ſalt*, and the *hotter* the *Animal*, or the *ſtronger* the *Fire* is,

is, the greater is the *Corroſiveneſs* of the *Salt*.

1. The *Salt* in the *Animal Humours* is made *corroſive* by its too great *Volatility*, and by this the *Apthæ* in *Fevers* are produced in the *Tongue* and *Mouth*, as the *Tongue* is *bliſtered* by *Spirit* of *Sal Armoniac* very *volatile*. This I call the *Urinous Corroſiveneſs*, and it is cured by the ſame Medicines as the *Saltneſs* of *Humours*; for theſe States differ but in degree of a *high Fermentation*, by which they are prepared, and therefore requires the ſame *Specific Taſtes* of *watery*, *acerb*, *tartareous* and *mucilaginous Medicines*; but thoſe which are more ſtrong can only ſucceed in the *corroſive State*.

2. The next Species of *corroſive Acrimony* is produced from a *tartareous*, or *natural vitriolic Acidity* much raiſed by *Fermentation*, when, being joyned to the *volatile Oyl* of *Blood*, it is made more *ſharp*; ſo from *Bread*, and all *tartareous Vegetables*, an *acid Spirit* may be diſtilled.

The *Acrimony* of the *Spurge Juyce* reſembles this *Acrimony*. The *Oyl* is manifeſt by the *Milkineſs* of the *Juyce*; and that an *Acid* is in the ſame *Juyce*, appears, becauſe it changes the Colour of the *Knife* which cuts it. Moreover, This *milky Juyce* is dryed into a *Reſin*, and all *Roſins* yield much *Oyl*, and a little *Acid*.

3. The Third Species of *Corroſiveneſs* is from the Mixture of a *pungent*, *burning Salt*, and a *high vitriolic Acidity*, like that in *Sal Armoniac*, which burns and corrodes the *Mouth*, and this may be called a *muriatic* or *armoniacal Corroſiveneſs*.

4. The Fourth and higheſt Species of *Corroſiveneſs* ariſes from *Putrefaction*. All *Putrefaction* is joyned with a *fœtor*, and all *fœtid Matter* corrodes the *Ulcer*.

The Cure of *Corroſiveneſs* is by the correcting the *vitriolic Acidity* or *Saltneſs*, by the *Medicines* above-mentioned, and by ſtopping the *high* and *putrefactive Fermentation* of *Humours*.

The *Acrimony* of *Aqua Fortis* is corrected by the *Oylineſs* of *Spirit* of *Wine*, or the *Caput Mortuum* of the ſame *Minerals* from which it is diſtilled; ſo the *acid Corroſiveneſs* of *animal*, *vitriolic Acidities* is tempered by *Minerals*, or *Animal Aſhes*, and *volatile Salts*. And the *ſalt Corroſiveneſs* by the *crude* Taſtes; as *Tartar Acids*, and *Styptic*, *mucilaginous Plants*.

The *Saturnine Styptics* ſtop *Fermentations* moſt ſtrongly, and ſo do *acerb Styptics*, as *Plantane*, and *Opiates* alſo. All *Evacuations* by *Bleeding*, *Purging*, are neceſſary, and a *cooling Diet* alſo.

CHAP.

CHAP. XIV.

Of the Putrefaction *of* Animal Humours.

1. THE *Meat* in the *Stomach* is ſometime *putrid* by too high a *Digeſtion* in a *fœtid Ructus*, which is very *Nidorous*, or the *Ulcers* of the *Stomach*.

2. The *Saliva* has a *nauſeous*, *fœtid Savour*, ſometimes from *putrid Fevers*, or the *Corruption* of the *Fœtus* in the *Womb*, or *Ulcers* in the *Lungs* or *Mouth*.

3. The *Mucus* of the *Aſpera Arteria*, and the *Noſe* is *fœtid*, from the *Ulcers* in thoſe parts.

4. The *Seminal Humours* are *fœtid*, by the *Ulcers* in the *Genitals*; and the *Blood* of the *Infected*, by the *Pox* is full of a *putrid Ferment*, or *acrid Salt*, which makes their *Sweat* and *Breaths* to have a *fœtid Savour*.

 5. The

5. The *Spirits* themſelves become very *fœtid* in *putrefied Bloods*, by *Pains* and *Paſſions*, and *Infections*. By *venomous Bites* the *Fœtor* is alſo increaſed.

6. The *Milk* putrefies by the *Stagnation* in the *Breaſts*.

7. The *Humours* of the *conglomerate* and *conglobate Glands* putrefie and ulcerate in the *Scrophulæ*.

8. The *Blood* putrefied has loſt its *Fibers*, which makes it not to coagulate when *cold*, and it ſmells *fœtid*.

9. The *Salt Serum* of the *Blood* is turned by *extraneous* or *internal Ferments* into the Matter of the *Itch*, *Leproſy*, and *Ulcers*. Upon the *Evaporation* of the *natural Spirits*, the *vitriolic Acid* prevails, on which depends the *chylous Whiteneſs* of *Matter*, which is precipitated and changed by it; ſo the *Serum* of the *Blood* is changed into a *white*, *milky Liquor* by *Spirit* of *Niter*.

10. The *Urin* and *Sweat* ſtink in *putrid Fevers*, as the *bilious Stools* do, and the *Blood* it ſelf.

There are Three kinds of *Thinneſs* in *Animal Humours*.

1. An *aquous Seroſity*, which is evident in the *Blood*, which is *crude*.

2. A more *fluid Conſiſtence* of *Blood*, depending on a great *Rarefaction* of *Blood*, whereby

whereby its own *oyly* and *ſalt Particles*, by their Agitation, attenuate and diſſolve the *natural Viſcidity* of the *Blood*, as appears in *Hæmorrhagies*, and the *hot Scurvey*; this is only the next degree or ſtep to *Putrefaction*.

3. The Third Cauſe of *Tenuity* in the *Humours* is the *Putrefaction* of them, which is a perfect Deſtruction of all their *viſcid* or *fibrous Conſiſtence*, by a *high* and a *long Fermentation*; ſo in the perfect, ripe *Matter* of an *Ulcer*, the *Viſcidity* is deſtroyed; and in *putrefied Eggs* their *ropy Conſiſtence* is altered, and made *fluid*, ſo as not to *thicken* by *Boyling*.

The Cauſes of *Putrefaction*, and a *high Fermentation*, differ only in degree.

1. The *natural Fermentation* produces only *nutritious Humours*, and no farther reſolves the *alimentary Maſs* than what is neceſſary for the perfection of a fit Nutriment; but a preternatural *high Fermentation* proceeds farther, and produces both the *Acrimony*, *Saline*, or *vitriolic*, or a *thick Conſiſtence* by *Coagulation* of the *Chyle* upon the *Blood*; but in the *putrefactive Fermentation* it is continued to the perfect Diſſolution of all the *Viſcidity* of our *Humours*, according to the Obſervation of *Crato*, *Fibræ Sanguinis, cum mittitur infectis peſte ita putridæ ſunt*,

ut concreſcere nequeunt; and this is properly called the *putrefactive Fermentation*; for in the *Plague*, the *Infection* putrefies the *Blood*, and the *coagulate* or *putrid* Parts are thrown upon the *Skin*, and the whole *Body* ſtinks; ſo that the *Eremite*, whom *Borellus* mentions, knew a Place infected by the *Plague* only by the *Smell*, which *Smell* was as he related; *fœtidus inſtar calceorum uſtorum*; and *Crato* obſerved, *contagii & fœtoris magnam eſſe ſimilitudinem.*

Whatſoever other Cauſes produce a *high Fermentation*, and continue the ſame very long, they cauſe a *Putrefaction* in the *Blood*, as all *feveriſh Ferments.*

2. When an *extraneous Ferment* corrupts a particular *Humour*, as the *Pox* doth the *ſeminal Humour*, the *Itch*, and external *Venoms* from the *Bites* of *mad* or *poyſonous Animals*, infect the *Succus Nutritius*, or *Blood* near the *Skin*, and this is a *virous Putrefaction.*

3. Any inward *Humour* ſtagnating corrupts, and becomes a *Ferment*, as the *Sanies* in the *Ulcers* of the *Lungs*, *Liver*, or *Kidnies*, or *Cancers*, or *Gangreens*, which infect and putrefie the whole *Maſs* of *Blood* by little and little; and this may be called an *Ulcerous Putrefaction*, ſuch as is procured by *Suppuratives* laid to *Apoſtemes.*

4. There

4. There is a *cadaverous Putrefaction* in *Gangreens*, with the greateſt *fœtor*, and *Bladders* containing a *ſharp Water*. *Cancers* have ſuch a *Smell*, and that is a *corroding Ulcer*.

In the *Scurvy* there is a *Fœtor* of the *Mouth*, and the *Teeth* and *Gums* are corroded.

The *Humour* which iſſues from a *carious Bone* being taſted is *ſalt*, as Mr. *Regis* affirms.

By the great *Fœtor* we may know the *Putrefaction* of *Ulcers*, and the *corroſive Sharpneſs* of the *Humours*; and this may be called a *Scorbutic Putrefaction*.

The Cure of *Putrefaction* requires,

1. The Avoiding of the evident Cauſes of *Putrefaction* of *Humours*, and the inſiſting on an incraſſating Diet, which may produce a *viſcid Conſiſtence* in the *Blood*; as all *viſcid Broths*, and *Jellies* of *Calves Feet*, *Harts-Horn*, *Ivory*, *Iceing-Glaſs*. All the *Mealy* Diet is here very convenient, and *Milk* Diet, and all the Diet preſcribed in the Cure of *too high a Fermentation*; but the Diet in *Fevers* muſt be *thin*.

2. The *ſharp Choler* and *acrid Ferment* in the *Stomach*, and *oyly* Temper of *Blood*, muſt be evacuated, and corrected by the *Medicines* mentioned in the Cure of a *high Fermentation*, for to that all *Putrefaction* muſt be imputed, according to the Obſervation

vation of our Ancient Phyſicians; θερμότερον γίνεται σηπόμενον ἅπαν, whatſoever putrefies is made hotter.

3. Every *extraneous Ferment*, and all kind of *purulent Matter*, muſt be evacuated according to the old Rule; *non alterari quod putridum, ſed tolli poſtulat.*

Theſe following Taſtes check the *Fermentation*, and preſerve the *Conſiſtence* of *Liquors*, and precipitate the *Ferment*.

1. *Acids*, by which we ſtop *Fermentations* and *Putrefactions*. We preſerve our *Plants* in *Vinegar*, when *pickled*. We find the *Vinegars*, which we call *Theriacalia Aceta*, to do much good in *putrid Fevers*, and the *Plague*. *Treacle Water* has much of an *Acid* in it. We ferment *Gangreened Parts* with *Vinegar*; and the *Juyces* of *Vegetables* are preſerved from *Corrupting* by the *Acid Fumes* of *Sulphur*, which alſo reſtore them to their former Vigour. The *Oyl* of *Vitriol* is uſeful to *putrid Parts*.

2. The *ſalſo-Acids* are very good in all *Putrefactions*, and therefore all *Gangreens* are fomented with *Brine*, *Sea-Water*, or *Urin*; and common *Salt* preſerves our *Humours* from *Putrefaction*; and *Spirit* of *Salt* is uſeful for *Imbalming* and *Preſerving* of *Bodies*, and againſt the *Putrefactions* in the *Mouth*.

3. *Styp-*

3. *Styptics*, *Acerbs*, and *Auſteres*; as *Tormentil*, *Pentophil*, *Biſtort Roots*, *Bole*, *Terra Sigillata*, are uſed as *Preſervatives* in *malignant Fevers*, and the *Bitings* of *Mad-Dogs*.

Theſe following Taſtes preſerve the Mixture of *Humours*, and their *Fluidity*.

1. *Fixed Salts* hinder *Putrefaction* and *Fermentation*; ſo we foment *Mortified Parts* with *Lixiviums* and *Lime Water*. Both *volatile* and *fixed Salts* hinder the *fermenting* of *Milk* by *Rennet*, and *volatile Salts* hinder the *Putrefaction* of *Animal Humours* by the *Bite* of a *Viper*.

2. *Bitters* preſerve *fermented Liquors* from Decay. Our *Chyle* is preſerved from *Putrefaction* by the *Bitterneſs* of *Choler*; and our *bitter Turpentines*, as well as *Cedar* it ſelf, preſerve *dead Bodies* from *Corruption*; and we prevent *Gangreens* by *bitter Plants*; as *Roots* of *Gentian*, *Ariſtolochia*, *Leaves* of *Centaury*, *Rhue*, *Wormwood*, *Scordium*; and by *Myrrh*, *Aloes*, and *Meal* of *Lupines*: and we give inwardly *Treacle* and *Mithridate*; all which have a great *Bitterneſs*.

3. We uſe *Acrid Plants* inwardly and outwardly in *Gangreens*. By the *Scurvy*, as *Water-Creſſes*, *Horſe-Radiſh*, *Spirit* of *Scurvy-Graſs*, *Muſtard-Seed*, *leſſer Celandine*, and *Garlic* or *Leek Pottage*. Outwardly, *Decoctions* of *Turnips*, and *Cataplaſms*.

4. By

4. By the *acrid Aromatics* we *ſweat*, and outwardly diſcuſs *Humours*; as *Roots* of *Serpentariæ*, *Contrayerva*, *yellow Flag*.

By *Spirit* of *Vine*, *Ulcers* are preſerved from their *fœtor*; and for the ſame end we uſe *ſpirituous Cordials* inwardly.

5. We uſe *vitriolic Styptics*, which are *corroſive*, alſo outwardly; as *burnt Alum*, *Sublimate*, and *Precipitate*, which, by their *Stypticity*, ſtop the *creeping Ulcer*; and by their *cauſtic Acrimony*, they deterge the *ſordid Ulcers*, and ſeparate the *dead Fleſh*.

APPENDIX

APPENDIX I.

CHAP. XV.

Of FEVERS.

IN a Feverish State of *Blood* there happens a violent *Fermentation* of the whole *Mass* of *Blood*, as appears by the *quick Pulse*, the *high-coloured Water*, the *Alterations* of *Heat* and *Chillinesss*. This sudden and great Alteration of the *Humours* the *Ancients* explained by *Putrefaction* of the *Blood*, or of *Choler*, or *Melancholy*, or *Pituita*. There are many other Notions framed for the explicating the Nature of *Fevers*, and their *Symptoms*; but I shall endeavour to explain more particularly the Opinion of the *Ancients*, and to accommodate it to the Modern *Hypotheses*.

That a *Fever* is a *Putrefaction* of the *Blood*, or some of its Parts, seems probable by the *fœtor* of the *Sweat* and *Urin* in that Disease,

Diſeaſe, by the infectious Nature of it, which lies in its *fœtid Effluviums*, which reduce the *Blood* of another *Animal* to the ſame State and Symptoms. None can deny the *Putrefaction* in the *Plague*, which putrefies all our *Humours* to a *mortified* State.

The *Petechiæ* and *purple Spots* ſhew *malignant Fevers*, and the *Small-Pox* and *Meaſles*, to be lower degrees of the ſame *Putrefaction*.

The *violent Heats* in ordinary *intermitting Fevers* produce a putrefactive Diſſolution of *Humours*, which are thrown off in *Sweats*, and appear in the *precipitated Sediment* of our *Urin*, as well as by the Evacuation in a *Cholera*, *Diarrhœa*, *Salivation*, which are Symptoms of the *Fever*, the whole *Succus Nutritius* is diſſolved from the *ſolid Parts*, as well as the *Maſs* of *Blood*. Hence the *Body* becomes flaccid, and empty of Nouriſhment after long *Fevers*; and then we ſupply that defect by a nouriſhing Diet, as after the *Fever*.

Since there appears ſo much of a *Putrefaction* in *Fevers*, I think that Notion of the Ancient Writers ought to be inſerted into the Definition of a *Fever*.

I ſhall next conſider the Notion of a *Fever*, deſcribed by a *Fermentation*, or *Ebullition* of *Blood*, cauſed by ſome *extraneous Ferment*,

Ferment. And ſuch a Commotion of *Blood* happens by *too high a Diet*, which ſtums or ferments the *Humours*; or elſe any of the *Humours*, which are naturally to be evacuated, being ſtopt in their *Expulſion*, become an *extraneous Ferment* to the *Blood*, or elſe the *Succus Nutritius*, as ſoon as it arrives at the *Blood*, is perverted by ſome *Dyſcraſie* of it into an *extraneous*, *morbific* Nature, and becomes a *Ferment*, or elſe the *Nutritious Juyces* are precipitated from the *Blood* by external *Cold*, and become the *ferment* of all *intermitting Fevers.*

The particular *Ferment* which produces each kind of *Fever* differs by ſome *Cacochymia* which was in the *Blood*, or *Succus Nutritius* before it was precipitated, by ſome abuſe of the *Non-Naturals*, or *Surfeits*, or *Colds*, though the *Succus Nutritius*, altered by external Cauſes, is the general *ferment* of all *Fevers*; yet that differing, according to the ſeveral *Cacochymia's* that may happen to it, the *ferment* of each *Fever* (being the immediate Cauſe of its *Ebullition*, and the firſt thing to be removed or changed) ought moſt particularly to be deſcribed, becauſe the *Cacochymia*, with which the *Succus Nutritius* abounds, produces the moſt eminent Symptoms of each *intermitting Fever*, and that *Cacochymia* does very much

much alter the general Cure of an *intermitting Fever*. As for inſtance, If *Rheumatic Pains* accompany an *intermitting Fever*, the *Cacochymia* preceeding the *Fever* is a *viſcid* State of the *Succus Nutritius*, and the *Blood* is *ſizie*, as in *Rheumatiſms*. In the Curing of this, the common Method for Curing the *intermitting Fever* is not ſufficient, of giving the *Cortex* without due Preparation, *viz.* for the *Cacochymia* infecting the *Succus Nutritius*, there muſt preceed the *Evacuations*, indicated by a *viſcid* State of *Blood*, *viz. Bleeding*, and *Purging*, or *Vomiting*, but not ſo much as in a *Rheumatiſm*, without an evident *intermitting Fever*.

The Symptoms preceeding the Fit generally denominate the particular kind of *Fever*, and if great, the whole depraved *Succus Nutritius* being evacuated upon a particular Part, the Cure is chiefly to be managed by removing that particular *Inflammation*, as *Pleuriſie*, or *Peripneumonia*, without any or very little regard to the *intermitting Fever*.

The Notion of a *Fever* being produced by the Irritation of the *Spirits* in the *Blood* and *Nerves*, very well explains the Action of the *Air*, and infectious or *Animal Humours*, for thoſe are firſt infected; and that the *febrile Effervescence*, *Commotion*, *Ebullition*,

tion, *Expanſion*, (call it as you pleaſe, for the ſame thing is underſtood by all theſe Terms) is managed by the *Animal Spirits*, which circulate from the *Nerves* into the *Blood*, and from thence to the *Nerves* again, is very probable, and this *Galen* ſeems long ſince to have deſcribed, when he defines a *Fever* to be the turning of the innate heat (which is the *Spirits*) into a fiery Nature; but it is as evident, that every Perſon has ſome antecedent *Cacochymia*, by which the particular Symptoms of the *Fever* are produced, and this, by exceeding the Strength or Expanſion of *Spirits*, makes the *Fever* malignant, or by being in no great quantity, or more looſely mixed with the *Succus Nutritius*, the *Fever* is mild, and eaſily cured. The ſeveral ſtages of the Diſeaſe are very naturally deſcribed by the ſeparation of the greater quantity of the *Succus Nutritius* from the *Blood*, in the increaſe of the *Fever*, and the *Criſis* is a full or perfect Separation of all the depraved *Succus Nutritius* from the *Maſs* of *Blood*, when the *Fever* is curable, and then the *febrile Effervescence* ceaſes; but if the *Succus Nutritius* be but in part ſeparated, the *Maſs* of *Humours* remain turbid and undepurated, and the *Fever* becomes fatal.

The *Spirits* being the chief Inſtruments of all *Fermentations*, the ſeveral Stages of this Diſeaſe muſt be managed by them; but we muſt look farther, and deſcribe the *Humours* which irritate them firſt into Motion, and the depraved *Humours*, which the irritate *Spirits* endeavour to exterminate from the *Maſs* of *Blood*, the Motion of the *Spirits* would ſoon be ſtopt, as we find in *Ephemera's*, if ſome depraved *Humour* in the *Blood* did not ſupport the Irritation of them, who cannot naturally depurate the *Blood* under 14 or 21 Days, or longer. Hence it appears how reaſonable the Opinion of our Moderns is, who deſcribe a *Fever* as an *Effervеſcence* of the *Blood*, by which it clears it ſelf of ſome *heterogenious Particles*, which, as they produce the *Effervеſcence*, are called a *Ferment*; and as they irritate the *Spirits* a *Venenum*; and as they are the depraved Matter of the *Succus Nutritius*, the *putrid Particles* of it, or *febrile Sediment*, appearing in the *Urin*. It is not my Deſign to oppoſe any Author's Judgment, but to reconcile theſe ſeveral Opinions, and put them all into the Definition of a *Fever*, thus.

A *Fever* is a preternatural *Fermentation* or *Effervеſcence* of the *Blood*, occaſioned by ſome *Ferment* irritating the *Spirits* of the *Blood*

Blood and *Nerves*; ſo the Diſſolving, or Putrefying, and Separating ſome part of the *Cacochymical Succus Nutritius* from its Mixture with the *Maſs* of *Humours*.

The tumultuous Agitation of the *Spirits* in the *Ephemera* happens by the ill Uſe of the *Six Non-Naturals*.

1. As *Surfeits*, which are Cured by a *Vomit*, *Purge*, *Clyſter*, by which the putrefying Diet, which is the *Ferment* here, is carried off.

2. The *Heat* of the *Sun* being exceſſive inflames the *Spirits*; and *Opiates*, and *cool things*, readily compoſe them, and *Oxyrrhodines*.

3. Too much *Labour* ſpends and agitates the *Spirits*, in which caſe *Spirituous Cordials*, *Wine*, and *Reſt*, are neceſſary.

4. *Anger* diſorders the *Spirits*, whoſe furious Motions are beſt repreſſed by *Opiates*, and *cool Emulſions*.

5. Long *Watchings* require *Opiates* and *Anodynes*.

6. *Grief* agitates the *Spirits*, and ſpends them; for which, *Wine*, *Spirits*, and *Opiates*, are neceſſary.

The Cure of an *Ephemera*, which is a tumultuous Motion or Inflammation of the *Spirits*, requires theſe Taſtes.

1. *Acids* in *cool Liquors*, *Sp. Nitri dulcis*, *Sal Prunell. Tamarinds*, *Gas Sulphuris*, or the *Juyces* of *Acid Fruits*.

2. *Mucilaginous* and *watery Liquors*, *Aq. Hordei*, *cum Syr. Limonum*, *Milk Waters*, *Emulsions*.

3. *Opiates*.

4. *Diaphoretics* of a mild Nature, *bitterish*.

5. *Styptics watery* to stop the *Fever*, *Plantane*.

Bleeding, *Purging*, *Clysters*, *Vomiting*, *Quiet*, and *Abstinence*, or a *thin Diet*, often stop the *Effervescence*, by carrying off the *fermenting Humours*.

The Ancient Writers distinguished *putrid Fevers* by the *Putrefaction* of *Blood*, *Choler*, *Melancholy*, and *Phlegm*; and this is to be explained by an *Effervescence* happening in such a particular *Cacochymical Blood*.

The common *Fever* in *England* is an *intermitting Fever*; and that is the *putrid Fever* the Old Physicians have described, and this is produced by the *Changes* of our *Air*, the *viscid Nature* of our *Diet*, or the *infectious Vapours* of the *Earth*, and *Seas* encompassing us, which precipitate or putrefie the *Nutritious Juyces* of our *Bodies*, and that is evident in our *Urins*, and is the *Matter* of all *critical Evacuations*, by which the *Fever* is cured, and this supplies all the *Humours*

mours for *colliquative Evacuations* in *Fevers*; as *Diarrhœa's*, *Salivations*, *Sweats*, &c. This being evacuated upon particular Parts produces the ſeveral *Inflammations*; as *Quinſie*, *Apoplexies*, *Lethargies*, *Palſies*, *Pleuriſies*, *Rheumatiſms*, *Cholics*, which are the Symptoms of the ordinary *intermitting Fever*, and diſtinguiſh it into its ſeveral Species.

This depraved *Succus Nutritius*, by Natures Method, ought to be fully ſeparated from the *Blood*; but Phyſicians do not commonly truſt that tedious way, but by the *Cortex* they precipitate what is eaſily ſeparable of *Nutriment* by the *Urin*, and re-aſſimulate the reſt of the *Nutritious Serum* to the *Blood*, as will manifeſtly appear by obſerving the ſeveral Changes of the *Urin*, and its *Sediment*; and we obſerve that *Bitters*, like *Choler*, are the beſt *Sanguifiers*, and alſo the beſt *Febrifuges*, and the *Cortex* has a moſt eminent *Bitterneſs*, not unlike the *Bitterneſs* of *bitter Almonds*, by which it re-aſſimulates part of the *Nutritious Juyces* to the *Maſs* of *Blood*.

I will mention the ſeveral *Cacochymia's*, which are only the ſeveral States of the *Nutritious Humours*, antecedent to the *febrile Effervescence*, by which, the ſeveral Species of the *intermitting Fever* are diſtinguiſhed; but I muſt firſt obſerve, that the *intermit-*

ting Fever differs little from the *Ague*, but by having more of the *Succus Nutritius* putrefied, and precipitated from the *Maſs* of *Blood*, and that ſo much of it is not *ſweat* off by every *Paroxyſm* in the *intermitting Fever*, as is in the *Ague Fit*, which makes the *Fever* leſs in the *Intervals* of the *Fit*; but the *intermitting Fever* often changes into the *Ague*, and is cured by the ſame Method.

Firſt, If the *Fever* happens in the *bilious Cacochymia* of *Blood*, and in *Young Perſons* in the *Summer* time, a *Cauſus* is produced, with extream *Heat* and *Thirſt*, and in this the *Heat* and *Thirſt* is much abated by *Acids*, and the *Fever* is to be treated by ſuch Methods as reſpect both the *bilious Cacochymia*, and continued or *intermitting Fever*, whether the *Tertian Ague* has the ſame *Cacochymia*, and intermits every other Day.

The Cure of this *Cacochymia* indicates,

I. *Vomiting* in the beginning, and *Purging* on the Days of Intermiſſion, with *Decoct. Amarum*, or *Glyſters*, to evacuate the abounding *Choler*.

II. The *Choler* is to be precipitated from the *Blood*, by *Urin*, and *Sweats*, and the *Liver* opened.

1. By

1. By *Acids*; as *Crem. Tart.* ℥i. *in Chamomile Flower Poſſet-Drink*, given before the *Fit*, or *Juyce* of *Limons*, with *Water* and *Wine*, or *Spirit* of *Sulp.* 20 drops in *Fountain-Water* or *Purſlain-Water*, with *Sp. Sulph.* ℈ſs, and *Syrup* of *Limons*.

2. *Salſo-Acids* are *Diuretics* and *Sudorifics*; as *Tart. Vitriol. Sal Armoniac. Arcanum duplicatum*, of any gr. xv. *Oc. Canc.* ℈ſs.

Or the *Salt* Mixture of *Riverius*; as *Sal Abſynth.* ℥ſs. *Sp. Sulph. gut.* xii. *Syrup* of *Poppies* ℥ſs. *Carduus-Water* ℥iij.

Or *Mixt Salts*; *Sal Abſynth. Prunell. Antim. Diaph. ana* gr. xv.

3. *Bitters* have the ſame effect of *Sweating*, or re-aſſimulating the *Nutritious Juyces*; as *Aq. Plantag.* ℥iij. *Theriacæ* ℥i. before the *Fit*, *Gentian*, *Centaury*, *Feverfews*, *Chamomile-Flowers*, *Chamædrys*, *Vervein*, &c. decocted, and given with *Myrrh* or *Mithridate*, before the *Fit*; theſe open the *Liver*, for the better Paſſage of the *Choler*; they alſo depurate the *Succus Nutritius*, and prevents its *Putrefaction* in *Fevers*.

Chelandine and *Saffron* are alſo uſeful in *Tertians*, by opening the *Liver*, and helping the *Secretion* of *Choler*, as is alſo *Dandelion*.

III. The *feveriſh Ebullition* may be ſuppreſſed by *Acerbs*; as Decoction of *Ribwort*, *Plantain*, or the *Juyces* of *Plantain*, *Houſe-Leek*, *Sorrel*, *Purſlain*, *Polygonum*; or by *Auſteres*; as *Avens*, *Cinquefoil*, *Roots* of *Plantain*, St. *John's-Wort*, *Roots* of *Tormentil*, *Ulmaria Leaves*, *Juyce* of *Millefoil*, *Barks* of *Aſh*, *Tamariſk*; but in general Uſe the *Cortex* has the greateſt Commendation.

Alum is alſo much extolled; but repeated *Bleeding*, and all the Methods for Curing the *Cacochymia*, I conſtantly uſe before the Cure of the *Fever* by the *Cortex*, unleſs the Danger of Delay be great.

Outwardly we apply,

1. *Styptics*, *Nut-Tree-Bark* ſteeped in *Vinegar*, and *Mouſe-Ear*, or *Shepherds Purſe*, *Gooſe-Tanſie* ſteeped in the ſame, with *Salt* applied to the *Wriſts*.
2. *Opiates* externally as well as internally, *Ung. Populeon* ℥ij. *Opium* gr. iv. *Spiders Web*, *ſ. a.* applied to the *Wriſts*.
3. *Salſo-Acids* externally as well as internally, *Sal. Gemm. Sal Armoniac.* and *Niter*, *Soot* and *Vinegar*, with *Spiders Web*, *Sea-Salt*, *Currans* and *Hops*, applyed to the *Wriſts*.

Secondly,

Secondly, If an *intermitting Fever* happens in a *mucilaginous* Conſtitution of *Blood*, ſuch as is in *Phlegmatic* Perſons, Women, or Children, the *putrid Fever* takes the Type of a *Quotidian*, the *Paroxyſms* laſt many Hours, and the Diſeaſe 40 Days or more, and a *Paroxyſm* happens every Day, with great *Cold*, and the *Heat* is not very great afterwards.

In this *pituitous Dyſcraſie* of *Blood*, we muſt vomit off the quantity of *Pituita*, and purge upon Intermiſſions, and the *pituitous Cacochymia* muſt be corrected by *Bitters*; as,

1. *Bitter Decoction*, *Wormwood-Wine*, *Myrrh*, *Juyce* of *Wormwood* one Spoonful, or *Juyce* of *Chamomile* in *Wine*, before the *Fit*, *Mithridate* or *Treacle* before the *Fit*, or *Carduus-Leaves* powdered. *Elixir Proprietatis* ℈i. *Aq. Lumbric.* ℥ij. before the *Fit*. *Radix Serpentariæ* ℥ſs. externally. The *Stomach* may be fomented with *Gentian*, *Wormwood*, *Mint* and *Aromatics* boiled in *Wine*.

2. *Fixed Salts* and *volatile* evacuate the *Cacochymia*, both by *Sweat* and *Urin*. *Sal Abſynth. Sp. Sal. Arm.* in *Aq. Card. & Theriac.*

3. *Aromatics*, *Sal volatil. oleoſum.*

The external Applications are ſuch as quicken the *Pulſe*, and thereby keep off the *Cold*; as *Camphire*, *Soot*, *Saffron*, *Galbanum*, *Tur-*

Turpentine with *Olibanum* and *Bole*, *Myrrh*, *Saffron*, *Aloes*, *Onion*, *Gun-Powder* and *Soap*, *Nettles*, *Rheu*, *Featherfew*, *Wormwood*, bruiſed together.

This *Fever Sylvius* calls his *Salivaris*, or *Pituitoſa*.

Thirdly, If an *intermitting Fever* falls into a *tartareous Blood*, or *Lympha*, this *Fever* has *Gripes*, and *Pains* of the *Belly* attending it, a *low Pulſe*, *little Thirſt*, *crude* and *watery Urin*, but much *Cold*; for the Curing of which *Cacochymia*, *Vomits* and *Clyſters*, ſuch as are uſed in the *Cholic*, much conduce to diſcharge the *tartareous Lympha*, and for the correcting of it.

1. *Volatile Salts*.

2. *Diſtilled*, *aromatic Oyls*, which correct the *Chilline ſs* attending this *Fever*. *Oyl* of *Cloves*, *Mace*, or *Sal volatile oleoſum*, with *Laudanum*, for the *Pains*.

Fourthly, If the *intermitting Fever* falls into a *flatulent*, *crude Blood*, a *Diſtenſion* is perceived in the *Belly*, or *Inflation*, *ſhort Breathing* in the *Lungs*, and *wandring*, *nervous Pains* in the *Limbs*, with *Giddineſs*, and *Noiſe* in the *Ears*. In the Cure of this *Fever* the *Flatulencies* muſt be removed, as well as the *Effervеſcence* ſuppreſſed.

Fifthly,

Fifthly, If a *Fever* happens in a *ſerous Cacochymia*, the *conglobate Glands* are affected, and the *Limbs* with *Laſſitude* or *Pains*; the *conglomerate Glands* are alſo affected, as appears by *Dulneſs* of the *Head*, and *Sleepineſs*; by *Coughs*, *Hoarſeneſs*; and this *Sylvius* calls, *The Catarrhal Fever*, and the Cure of this requires, the *Evacuations* of the *Serum*, by *Purging*, *Urin*, *Sweating*, as well as the Cure of the *Effervescence*. *Errhines*, *Maſticatories*, and *Fumes*, are uſeful.

Sixthly, If a *Fever* happens in a *rancid*, *oyly* State of *Blood*, it produces a *ſcorbutic Fever*, with high-coloured *Urin*, and *Spots* in the *Skin*; and in this *Antiſcorbutics* are as neceſſary as the *Febrifuges*.

Seventhly, If an *intermitting Fever* happens in a *fizie*, *viſcid Blood*, it produces *rheumatic Pains*, and all kinds of *Inflammations*; as the *Apthæ*, or *Inflammations* of the *Mouth*, the *Quinſie*, *Parotis*, or the *Inflammation* of the *Glands*, the *Inflammation* of the *Inteſtines*, or *Stomach*, or *Liver*, or *Spleen*, *Nephritis*, or *Inflammation* of the *Kidnies*, *Phrenitis*, or the *Inflammation* of the *Brains*, *Ophthalmia*, *Peripneumonia*, *Pleuriſie*, *Inflammation* of the *Breaſts*, the *Uterus*, or *Stones*, *Lethargies*, *Apoplexies*, *Palſies*, *Rheumatiſms*, and all *hot Pains*.

Theſe

These are the Distempers attending *Fevers*, when the *Blood* is *frizie*, and that requires all the Methods proper for altering that, as well as stopping the *Fever*.

Eighthly, If the *Fever* happens in a *salt Blood*, it has great *Thirst* attending of it, and *Hæmorrhagies*, and runs into a *tabid* State. In this *Fever*, I observed a *Hæmorrhage* to preceed every Fit of the *intermitting Fever*; in Mr. *Schrimsher* of *Aquilate*, who, through an Aversion to the *Cortex*, lost his Life in it, and died *Convulsed* after divers Fits of the *Fever*, with a *Hæmorrhage*, which returned at a certain Hour.

Ninthly, If the *intermitting Fever* happens in a *vitriolic* State of *Blood*, all the *hypochondriac* Symptoms are joyned with the *Fever*, and the *Fever* appears under the Type of a *Quartan*: The Cure of which requires Evacuating,

I. Of the *vitriolic Humour* in the *Stomach*, by *Vomiting*, and *Purging* off the same on the *intermitting* Days.

II. The *vitriolic Humour* must be corrected,

1. By *Bitters*, *bitter Decoction*, *Wormwood Wine*, *Elix. Proprietatis*, *Myrrh*, with *Treacle*.

2. By

2. By *fixed Salts*, *Extract. Carduus* with *Salt* of *Wormwood*. Take *Conſerve* of *Hips*, *Wormwood*, *Enula*, *Scurvy-Graſs*, *Citron Pills*, of each ʒi. *Saffron* ℈ij. *Sal Abſynth.* ʒij. *Confectio Alcherm.* ʒſs. with *Syrup* of *Citron*, make an *Elect.*

3. *Chalybeates* are abſolutely neceſſary after the *Fever* is ſtopt, to correct the *vitriolic Humour*; and ſometimes the *Fever* cannot be ſtopt till the *Humour* is corrected, as I have often experienced in my younger Son, who had the *Quartan* four Years by *Relapſes*. No *Febrifuge* could put off his *Fit* till he had uſed *Steel* fourteen Days, or three Weeks, and the *Cortex* could do him no Service, nor would put off a *Fit*; at laſt, he having uſed at leaſt a Pound of it, by often repeating of it, profuſe *Bleeding*, as 40 Ounces of *Blood* from a Child of Nine Years Old, did more for the Cure of his *Ague* than all the *Febrifuges*, for his *Blood* was extream *viſcid*, and *Steel* always cured his *Cachexy*. I gave him *Vitriolum Martis* ſometimes, and Dr. *Willis's Steel* at others, diſſolved in a convenient *Julep*.

4. The *Earthy Calces*; as *Antim. Diap. Bezoar Minerale*, with *fixed Salts* and *volatile*,

volatile, may be reduced into *Pills*, with *Extract* of *Gentian*. The *Aſhes* of *Oyſter-ſhells* are good to correct the *vitriolic Humour*.

III. The *Paroxyſm* muſt be checked or ſtopt,

1. By *bitter Styptics*; as the *Cortex*. The reaſon of its inefficacy in the Doſe, in which it was formerly given, is the Mixing of the *Chips* of the *Tree* with the *Bark*; and it is evident, that the *Bark* exceeds the Taſte of the *Wood* in all *Trees*, and is of a ſtronger Virtue. Let therefore the *Apothecaries* keep the *Chips* for *Decoctions*, and uſe the *Cortex* only in *Powder*; for they well know, that the *Cortex* of *Guaicum* is ſtronger than the *Wood*.

Lignum Colubrinum, *Aſh*, *Guaicum*, *black Cherry-Tree*, are much commended for *Quartans*; as are alſo *Myrtle-Leaves*, and *Miſletoe*.

Five-Leaved-Graſs, *Potentilla*, *Avens*, *Plantain-Roots*, are auſtere.

2. By *Acerbs*; as the *Leaves* of *Ribwort Plantain* boiled in *Poſſet-Drink*, which cures ſome where the *Cortex* has failed.

Alum is very much uſed, ℈i. in *bitter Decoction*, or with *Nutmeg*.

3. *Nau-*

3. *Nauſeous Bitters*; as *Carduus Leaves* ℥ſs. *Alum* ℈i. taken in *Ale* before the *Fit*, or *Myrrh* ℥ſs. in *Wine*, or *Treacle* ℥i. before the *Fit*.

4. By *acrid Terebinthinates*; as *Roots* of *Aſarum*, *Valerian*, *Serpentaria*, *Decoction* of *Ivy-Wood*, and *Savin* applied to the *Pulſe* with *Salt*.

5. By other *Acrids* of the *Orris* Claſs; as *Zedoary*, *Ginger*, *Contrayerva*; or other *acrid Aromatics*; as *Pepper*, *Radix Imperatoriæ* ℥i. *cum Vino*, *Pepper* 14 grains in *Wine*.

6. *Fœtid Acrids*; as *Rhue* one handful, *Red Sage* as much, infuſed in *Wine*, and given before the *Fit*. A *Nutmeg* roaſted in an *Onion*.

7. *Salſo-Acids*; as *Sal Abſynth.* ℈ſs. *Sal Prunell.* ℈ſs. *Sacch. Perl.* ℈ij.

The *Acerbs* and *bitter Styptics* precipitate the depraved *Succus Nutritius* from the *Blood*, the *Acrids* and *Salts* throw it off by *Sweat* and *Urin.* A *Purge* given ſix or eight Hours before the *Fit* evacuates the digeſted *Succus*, and is ſucceſsful after ſix or eight Months.

8. *Opiates* ſtop the *Pulſe*, and all *Fermentations.*

9. The

9. The *Pericarpia* are of *Styptics*; as *Bole*, *Maſtich*, *Burſa*, and *Aſtoris*, *Knot-Graſs*, *Argentina*.
Or *Acids*; as *Vinegar* with *Gun-Powder*.
Or *Cauſtics*; as *Nettles*, *Ranunculus*, *black Soap*.

Tenthly, If the *Fever* happens in a *Blood* putrefied, the ſeveral Sorts of *Malignant Fevers* are produced, with a *low Pulſe*, *feveriſh* Symptoms, *Watching*, *Delirium*, *Convulſions*, and a *ſudden failing* of the *Spirits*.

I. The *Spirits* being decayed, fixed, or oppreſſed, or weakened by *Evaporation*, become unfit to manage any extraordinary *Fermentation*; for the Depurating of the *Blood* by an *Effervеſcence* from any of its depraved *Succus Nutritius*; and, in this Caſe, all the Medicines againſt *Malignity*, which are of the following Taſtes, are very neceſſary; as,

1. *Volatile Salts* and *fixed*, *Cineres Bufonum*, *Salt* of *Vipers*.
2. *Acrids*, *Angelica*, *Zedoary*, *Imperatoria*, *Petaſitis*, *Serpentaria Virginiana*, *Contrayerva*, *Aq. Ber. ſpec. liberantis*.
3. *Bitters*: *decoct. Amarum ſine ſena*, *Mithridate*, or *Treacles*, *Syr.* of *Carduus*, *Scordium*, *Veronica*, *Vervein*, or the *Juyces* or *Extract* of them.

4. *Fœtids*,

4. *Fœtids*, *Camphire*, *Garlic*, *Caſtor*, *Troches* of *Vipers Fleſh*, *Rhue*.
5. *Mineral Sulph.* and *Calces*, *Antimon. Diaph. Bez. Miner. Cinnab. Antim.*
6. *Acids*, *Acetum Bezoardicum*, *Syr.* of *Citrons*, *Spirit* of *Vitriol.*
7. *Salſo-Acids* made by Mixing contrary *Salts.*

II. The Second Species of a *malignant Fever* is from the *Tranſlation* of the depraved *Succus Nutritius* upon the *Head* and *Nerves* in the *intermitting Fever*, which requires all manner of Revulſion; as *Bleeding* in the *Neck*, *Glyſters*, *Bliſters*, *Cataplaſms* to the *Feet*; beſides *Diaphoretics*, *Diuretics*, and *Cordials*, to ſupport the *Spirits*, and the *Fermentation.*

III. The Third Species of a *malignant Fever* is from the *Infection* of the *Air*, whoſe *fœtid Sulphurs* cauſe divers degrees of *Putrefactions* in ſeveral parts of our *Bloods*, and accordingly produce the ſeveral *epidemical*, *malignant* or *peſtilential Fevers.*

1. In the *peteckial*, *ſpotted Fever*, and the *ſcarlet Fever*, or *Meaſles*, the *florid Particles* of the *Blood* are corrupted, or coagulated, or putrefied, and thrown into the *Skin.*

2. In the *Small-Pox*, not only the *florid*, but alſo the *viſcid Particles* of the *Serum*

are coagulated, and thrown into the *Skin* to putrefie, and be expelled. We obſerve in the *Small-Pox* a *fizie Blood*, as well as a *putrefactive* State of *Humours*; the *Sizineſs* makes it an *inflammatory Fever*, and commonly requires *Bleeding* before and afterwards. We keep a *thin* and *low* Diet, both in reſpect of the *Inflammation* and *Fever*. We uſe alſo Medicines againſt *Malignity*, becauſe of the *Imbecillity* of *Spirits* in ſo great a *Putrefaction* of *Blood*, and that we may expell the *putrid Particles* of the *Succus Nutritius*. We uſe alſo, after the Expulſion of the *Succus*, *Febrifuges*, as the *Cortex*, to remove the *Paroxyſm* of the *intermitting Fever*, joyned with the *Small-Pox* or *Meaſles*. And we ought to conſider the ſeveral *Cacochymia's* which diſtinguiſh the Species of the *Small-Pox*.

3. In the *Plague* and *Poyſons*, which putrefie the *Blood*, the whole *Maſs* is putrefied; in this, a great Pain of the *Head*, with the greateſt *Faintneſs*, ſeizes; a *ſtinking Breath*, *wandring Pains* about the *Emunctories*, *Heat* and *Cold*, are the uſual Symptoms.

The *Bubo's*, *Carbuncles*, and *Petechiæ*, are *Particles* of the *Blood* drove into the *Skin*.

All things which preſerve from *Putrefaction*, preſerve from the *Plague*. As,

1. *Bleed-*

1. *Bleeding*, and *Purging* with *Aloetics*; as *Pil. Ruffi. Elix. Proprietatis.*

2. The Antidotes are,

1. *Bitters*; *Extract* of *Gentian* with *Myrrh*, *Conſerve* of *Tanſie*, *Wormwood*, *Rhue* with *Diaſcord. Treacle*, and *Conſerve* of *Wood-Sorrel.*

2. *Acids*; as *Spir.* of *Sulph. Niter*, *Salt*, *Vitriol* in *Wine*, *Drink*, or *Broths*, or *Juyce* of *Limons*, *Rhue*, *Vinegar*, with *Bread* and *Butter. Poſſet-Drink* with *Acetum Bezoardicum. Juniper-Berries* ſteeped in *Vinegar.*

3. *Aromatic Acrids*; chewing *Zedoary*, *Angelica*, *Mace* ſteeped in *Vinegar*, *Marigold-Flowers* in *Vinegar.* In pure Bodies the *Aromatics* do Injury; and to Infants vehement Dryers; *Camphorates*, *Myrrhates*, and *Bitters.*

4. *Fœtids*; *Rhue*, *Vinegar*, and *Camphire*, are to be ſmelt to, and *Tobacco* ſmoaked in the Morning, and the *bitter Wine* in the Morning, and a *Sudorific Elect.* at Night.

Sulphur with *Honey* is accounted an excellent *Antidote.*

Salt-Peter and *Sulphur* correct the *Air* by their *Fumes*, or *Gun-Powder*, or *Acetum Theriacale.*

3. *Styptics*; as *Bole*, *Tormentil*, *Pimpinella*, *Ulmaria* in *Wine.*

In the Summer, Young Men, take heed of hot things, and uſe *Acids* and *Styptics*, and moderately hot; as *Borrage*, *Balm*, *Saffron*, *Burnet*, *Citron Pills*, *Clovegilly-flowers*; or moderate *Aromatics* internally, and *Vinegar* with *Camphire*.

Aromatics inwardly are fitteſt for Winter and Old Perſons; *Oyl* of *Amber*, *Balſ. Peru*, *Nutmegs*. Outwardly, and in Fumes, *Pitch*, *Frankinſence*, *Aſſa Fœtida*, *Turpentine*, *Myrrh*, and other *reſinous Plants*. *Juniper*, *Cedar-Wood*.

All the *Bezoardics* above-mentioned are neceſſary to promote *Sweat*, and drive forth the *putrefied Particles* of the *Blood*.

The peſtilent *Camp Fever* is from Eating of *putrid Meats*, which ought to be *Vomited* and *Purged* off, and after *Bezoardics* for the *Malignity*, or *putrid* State of *Humours*.

In all *putrid Fevers* Authors adviſe to reſpect the *Malignity*, as well as the *Fever*.

The *continued Fever* differs not from the *intermitting*, ſince it remits in the beginning, or *intermits* at length, and they frequently change from one to the other, and the depraved *Succus Nutritius* is the *ferment* of both; but in the *continued Fever* it is not ſo eaſily precipitated from the *Blood*, and diſcuſſed by a *Paroxyſm*, as in the *intermitting*, and their Cure differs little.

1. All

1. All evident Cauſes of thoſe *Fevers* muſt be removed.

2. The depraved *Chyle*, or its quantity, muſt be evacuated by *Vomits*, *Purges*, *Clyſters*, that no new Matter may be ſupplyed to irritate the *Blood*.

3. The *Effervescence* of *Blood* muſt be depreſſed if too high.

1. By a *thin Diet*, *ſub-acid* or *mucilaginous Ptyſans*.

2. By *tartareous Acids*, *Syrups* of *Limons*, *Citrons*, and *Acid Spirits*, or *Quiddanies* of *Fruits*.

3. By *Acerbs*, *Tinct.* of *Roſes*, *Plantain*, *Sorrel* decocted, *Sedum*, *Poſſet-Drink*, *Serviſes*, *Berberries*.

4. By *watery* and *mucilaginous Liquors*; as *Emulſions*, *Purſlain*, *Lettuce-Waters*. By the *cichoraceous Plants*; *Barley-Water*, or *Milk-Water*, or *Whey*.

5. *Opiates*.

6. By *Bleeding*, *Glyſters*, *Vomiting*, *Purging* in the beginning.

4. The *Effervescence* of the *Blood* muſt be raiſed, if depreſſed through *Weakneſs* of *Spirits*, or multitude of corrupt *Succus Nutritius*, which ſtops the Circulation.

The *Bezoardics* above-mentioned excite a greater *Effervescence*.

5. The depraved *Succus Nutritius* muſt be precipitated from the *Blood* in the beginning, or increaſe of the *Fever*, by *Acids*, *Acerbs*, *Styptics*, which are the beſt *Febrifuges:* But the *Salts*, both *volatile* and *fixed*, beſt precipitate the *tartareous* Parts of the *Blood*, ſeparated by a long *Effervescence* at the end of the *Fever*, and they ſeparate it by *Urin* or *Sweats*; but the *Acids*, *Acerbs*, and *Styptics*, are good Precipitators of the *viſcid Salt*, and *oyly Particles*, which promote the increaſe of the *Fever*.

6. The diſturbed *Craſis* or *Conſiſtence* of the *Blood* muſt be reſtored; that is, ſome of the *Succus Nutritius* remixt with it into an equal *Conſiſtence*, and that by digeſtive Medicines, which partly precipitate the looſer *Particles*, and re-unite the reſt. Such are,

1. *Bitter Acrids*; as *Theriaca*, *Rad. Serpent. Contrayerva.*

2. *Salſo-Acids.*

3. The *Calces* of *Minerals*, and *teſtaceous Medicines.*

4. *Bitter Styptics*; as the *Cortex*, which precipitates, as is evident in the *Urin*, by its Stypticity, and digeſts, unites, or aſſimilates the depraved *Succus Nutritius* to the *Maſs* of *Blood*, which, for want of a due Doſe, ſeparates again from the *Blood*, and renews the *Fever*.

That

That the *Succus Nutritius* depraved is the *ferment* of a *Fever*, is evident, becauſe any *Animal*, *Nutritious Humour* depraved and ſuppreſſed, produces a *Fever*.

1. The *Milk* in the *Breaſts* produces the *Febris Lactea*, which being repelled, or putrefying in the *Breaſts*, is the *ferment* of that *Fever*, and is to be evacuated by a plentiful *Sweat*, or the *Lochia*.

2. The Suppreſſion of the *Lochia* produces the *purple Fever* in Women, which *Langius* calls, *Peſtis Sororum*; and this muſt be cured by Reſtoring the *Evacuation*; for the *Lochia* are here the *ferment* of the *Fever*; and by *Bezoardics*, the *putrid Blood* muſt be exhaled.

3. The Suppreſſion of the *Menſes*, or *ſeminal Matter*, produces the *Febris alba*, with *Pain* of the *Head*, *Stomach*, *Back*, and ſudden *Effervescences* happen, with *Laſſitude*, *Palpitation*, *Dyſpnæa*, and *Inflation* of the *Hypochondria*. This is to be cured by reſtoring the *Evacuation* of thoſe *Humours* which ferment the *Blood*.

4. The Suppreſſion of *Tranſpiration* produces a *Fever*, with *Rheumatic Pains*, and till that *viſcid Serum* is cleanſed by *Urin*, or *Sweat*, that is the *ferment* of a *Fever*.

A *vinous* or *high Diet* is often the occaſion of *Fevers*, and in this Caſe the depraved *Chyle* is the *ferment*.

Many of the *colliquative Fevers* are cured by Nature's Evacuation of the depraved *Succus Nutritius* by *Stools*, *Vomiting*, *Sweating*, or *Spitting*, *Bleeding*; and the reaſon of theſe different Evacuations, is, becauſe the *Succus Nutritius* is tinctured by ſome of the *Humours*, which ought to be ſecreted by the *ſecretory Glands* for that *Humour*; as *Choleric Vomits*, or *Diarrhœa's*, are by the *Liver*; *Phlegmatic Evacuations* by *Salivation*, or *Pancreas*; and *critical Evacuations* of *Blood* by the *Noſe*.

In *Inflammations*, the *Fever* preceeding it depends on a *viſcid Succus Nutritius*, which being all evacuated on any particular part, the *Fever* abates, which ſufficiently intimates what was the *ferment* of that *Fever*.

A *Hectic Fever* is produced by the depraved *Succus Nutritius*, which, by reaſon of the *Viſcidity* and *Saltneſs* of the *Blood*, cannot be aſſimilated to the *Maſs*, but it becomes a *febrile Ferment*, and it is evacuated by *Sweats*, *Urin*, *Spitting*, and *Looſeneſs*, and then the *Hectic Fit* is over, when the *Succus Nutritius*, which is the *ferment*, is wholly ſpent.

The

The *Matter* of an *Apoſtemum* is the *ferment* of a *Hectic*; as in thoſe of the *Liver*, *Lungs*, *Kidnies*; and this *Hectic* cannot be cured, without curing the *Impoſthume*; but the former *ſcorbutic Hectic* muſt be cured by altering the *Viſcidity* and *Saltneſs* of the *Blood*, by frequent *Bleeding*, and diluting of it, by *Milk Diet*, or the *Chalybeate Waters*, *Decoction* of the *Woods*, *Emulſions*, *diſtilled Waters*, and leaving off *fermented Liquors*, *Pectoral Decoctions*, and uſing a *thin Diet*, moſt apt to mix with *viſcid Blood*.

When I had obſerved, that all ſorts of *Cacochymia's* were joyned with *Fevers*, I could not omit this Diſcourſe about *Fevers*, as not impertinent to my Deſign, of deſcribing the preternatural State of *Humours*. I will farther obſerve, that the ſeveral *Cacochymia's* depend not on the *Fever*, as an effect of it, though that, after ſome time, may produce ſome of them; as a *viſcid*, *ſalt*, *vitriolic* or *putrid* State of *Humours*; but the *Fever* finds the *Cacochymia* in the *Blood*, which produces the Symptoms preceeding the *Paroxyſm*; as *Pains*, *Coughs*, *Vomitings*, *Gripes*, *Diarrhœa's*, &c. Hence it appears, that the antecedent *Cacochymia* depends on the ſame Cauſes, as at other times, when there is no *Fever*; but the *febrile Effervеſcence* agitates the *Cacochymia*, and

and thereby produces the *Evacuations*, or *Inflammations*, to which it pre-diſpoſed the Patient. And theſe Symptoms require the ſame Method of Cure, as at other times, but Care muſt be taken becauſe of the Complication with the *Fever*, that nothing may be done in Cure of the *Cacochymia*, which may prejudice the general Cure of the *Fever*.

The *Cacochymia* alters the Nature of the *Fever*, for a *pituitous*, *tartareous*, *ſerous* or *flatulent Cacochymia* depreſſes the *feveriſh Ebullition* too much; and for theſe, the Old Authors rationally uſed *Digeſtives* in *Fevers*, to correct the *Cacochymia*, and to raiſe the *Fermentation*, which is depreſſed by them, that the *Succus Nutritius* may be more eaſily digeſted, or putrefied, and, at laſt, by a *Criſis* ſeparated from the *Blood*.

In a *bilious*, *rancid*, *ſalt* or *putrid* State of *Blood*, the *Fever* is generally too acute, and (unleſs in the *malignant Fever* or *Plague*) muſt be depreſſed by *cool Alteratives*, which are the *Digeſtives* or *Precipitators* in ſuch *Fevers*; and this ſeems to be a general Rule in *Fevers*, that as the general Cure of the *Fever* muſt not increaſe the *Cacochymia*, ſo neither muſt the Cure of the *Cacochymia* either too much irritate

irritate or depreſs the *Fever*; but by *Bleeding*, *Vomiting* or *Purging* in the beginning, we abate the quantity of the *Cacochymia*, and, by *Digeſtives*, diſpoſe it for a Separation from the *Blood*, which, at length, the *Fever* expells, with the depraved *Succus Nutritius*, or, at leaſt, prepares it for a *Purgation* afterwards, which ought to reſpect the particular *Cacochymia's* after the *Fever*, as well as before.

If we conſider the various Cauſes of a *Cacochymia* above-mentioned, we cannot believe but every body is inclined to ſome one or other of them.

We have ſome particular degrees of *Fermentation*, by which our *Humours* are prepared that ariſe to a particular quality, by which the Conſtitution is called either *pituitous*, *tartareous*, *flatulent*, or *ſerous*, if they be too cool, or elſe they are too hot, as the *choleric*, or *ſcorbutic*, *ſalt*, *viſcid*, *vitriolic* or *putrid* Conſtitutions of our *Humours*. We have ſome of theſe from our Parents, and the Age, as it runs on, produces a various Temper of our *Humours*. In Children, the *Blood* is like the *Milk* they feed on, apt to turn ſowre; and for that reaſon, *Vomitings*, *Gripes*, and *Looſeneſſes*, attend their *Fevers*, as well as *Coughs*, and

and *ſore Mouths*, and *comatous* effects from the *Seroſity* of their *Bloods*.

In the Middle Age, the *Blood* is *florid* and *ſalt*, by which, they of that Age are diſpoſed to *Hæmorrhagies*, and all ſorts of *Inflammations*, *Conſumptions*, and the *hot Scurvy*, which are frequently complicated with *Fevers* in the Middle of our Ages; as *Pleuriſies*, *Quinſies*, *Phrenſies*, *Rheumatiſms*.

In the Conſiſtent Age, the *Blood* grows *vitriolic*, and produces *Dyſenteries*, *Cancers*, *Cholera's*, *Melancholic Winds*, which, with *Lethargies*, *Apoplexies*, *Peripneumonia's*, are frequently, at that Age, complicated with *Fevers*.

In Old Age, the *feveriſh Ebullition* runs low, and it is moſt eaſily ſtopt with a ſmaller Doſe of the *Cortex*; and ſince the *Saltneſs*, *Viſcidity*, and *vitriolic Acidity*, abounds in Old Men, as well as the *pituitous* and *ſerous Cacochymia*, they have ſome of the Diſeaſes depending on them; but eſpecially *Catarrhs*, and *Atrophy*, and *Pains* of the *Limbs*, are complicated with the *Fevers* of Old Men.

Particular *Cacochymia's* are not only produced by our ſeveral Ages, but alſo the different Seaſons of the Year incline us to different *Cacochymia's*.

The

The Winter diſpoſes us to *Rheums*, *Pains*, and *Coughs*, which depend on too much *Seroſity* retained, or ſtopt in the *Blood*; and the *Cold* checks the *Fermentation* of *Blood*, as well as other *fermented Liquors*, which hinders the thorough *Digeſtion* or *Fermentation* of *Humours*; from hence it appears, that Winter *Fevers* have *Coughs*, *Rheums*, *Pains*, and greater *Coldneſs* attending them, and are longer.

The ſudden Alterations of *Hot* and *Cold* produces a *Sizineſs* of *Blood*, and makes the Spring attended with *Pleuriſies*; *Rheumatiſms*, *Apoplexies*, *Lethargies*, and *intermitting Fevers*, have then ſuch Symptoms.

Cold is not ſo Injurious as the *Moiſture* of the *Air*, which makes the Tranſpiration leſs, and the preſſure of the Air alſo leſs; and, for this reaſon, *Fevers* frequently happen in *wet Weather*, with *Looſeneſs*, *Heavineſs* of the *Senſes*, and many inward *Inflammations*; as *Apoplexies*, *Quinſies*, *Epilepſies*.

In the *Spring* far advanced the *Blood* becomes more *heated*, and *choleric*, and then *Tertians* and *Eriſipela's* are complicated with the *Fever* and *Hæmorrhagies*.

In

In the *Summer*, the *Blood* is more *rancid*, *ſalt*, *viſcid*, and *hot*, and produces the higheſt *burning Fevers*, with *Vomiting*, *Diarrhœa's*, and *Inflammations*, and *ſore Eyes*.

In *Autumn*, the *Blood* is moſt *vitriolic*, on which, *Quartans*, *Melancholies*, *Dyſenteries* and *Epilepſies* much depend on.

This is the chief Seaſon for the *intermitting Fever*, with which the preceeding Diſeaſes are frequently complicated.

Since the late ſevere, cold *Winter*, it has been obſerved, that the *Blood* has been more *fixie* than uſual; and it is not improbable that ſuch a *Cacochymia*, may laſt ſome Years in the *Blood* of all Perſons, which may, upon the Fit of a *Fever*, produce the *Rheumatic Pains*, and *Inflammations* lately obſerved in *Fevers*. It ſeems probable, that after ſome time this State of *Blood* may be altered to another of a different kind, as a *putrid*, and then we muſt expect a *peſtilential Fever*. If there be a common *Epidemical State*, or *Cacochymia* of *Humours*, (which the *common Changes* of the *Air*, or the *Seaſons* of the *Year*, or the particular *Digeſtion* of our *Diet*, or ſome ſecret *Effluviums* of the *Earth*, or *Mineral Tinctures* in our *Water*, may produce) as we muſt obſerve by ſome common Diſtemper, which

ſeizes

ſeizes many every Year; we may very well allow, that the ſame *Cacochymia*, which produces the *Epidemical Diſeaſe* every Year, ſhould alſo occaſion ſome particular Symptoms in the *intermitting, ſtationary Fever*, not unlike the Nature of the *Epidemical Diſeaſe*, as if that were complicated with the *Fever*; ſo we may obſerve, that *Rheumatiſms* have been frequent of late, and all our *Fevers* have *Rheumatic Stitches* very much.

It ſeems very probable, ſince the *Plague* viſits us once in about Forty Years, which depends on a *putrid* State of *Humours*, that all the other *Cacochymia's*, which produce the ſeveral different kinds of *Fevers*, have alſo ſome kind of Revolution, in which they return alſo; and when it is *mucilaginous*, the *Fever* is like a *Quotidian*; when *tartareous*, it has *Cholical* Symptoms; when *ſerous*, it is a *Catarrhal Fever*; when *flatulent*, a *vertiginous Fever*, with *Windineſs* in the *primæ viæ*, and *Running Pains*: but if the *Cacochymia* be *Choleric*, a *Tertian* is produced; if *rancid, oyly*, a *ſcorbutic Fever*; if *viſcid*, *Rheumatic Pains*; if *vitriolic*, *Quartans* are produced. Theſe ſeveral *Cacochymia's*, and their *Epidemical Diſeaſe*, and *ſtationary Fever*, both depending on the ſame, may be obſerved every Year;

Year; and by keeping an exact Account, we ſhall, in time, find what *Cacochymiæ* and *Fevers* ſucceed each other, and in what periods we may expect their returns, though, it is probable, we ſhall never diſcover the general Cauſes which introduce the ſeveral *Cacochymia's*, upon which all *Epidemical Diſeaſes* depend.

APPENDIX

APPENDIX II.

An Introductory Diſcourſe to the Treatiſe of the Aſthma, *containing an Explication of the old Notion of the Defluxions of* Humours, *whereby the* Aſthma, *and divers other* Chronical Diſeaſes, *are produced.*

ALL the Diſeaſes which depend on a ſudden preternatural *Motion*, or *Flux* of *Humours*, are produced either by an *intermitting Fever*, or an *Ephemera*.

That moſt Diſeaſes may be Symptoms of *Fevers*, does ſufficiently appear to a diligent Obſerver of the *Phænomena* of *Fevers*, and they are deſcribed in the Books of our Modern Writers.

The particular *Cacochymia* in our *Humours* cannot produce the Symptoms of *Fevers*, without being rarified, impelled, or transmitted by *Defluxion* on ſome particular Part; and the Occaſion of this *Flux*, the Ancients imputed to the *Intemperies* of ſome Parts, which was the *terminus à quo*, as the *Head* or *Liver*; but the true Cauſe of the *Defluxion* is an *Effervescence* in the *Blood*, and the *terminus à quo* is the *Blood* it ſelf. The Veſſels through which the *Flux* is carried, are, the *Veins*, *Arteries*, *Lymphatics*, and *Nerves*, and ſeveral *excretory Glands*. The *terminus ad quem*, is the Part affected with *ſudden Pains*; as in *Rheumatiſms*, or in *ſudden Inflammations*; as in *Pleuriſies*, *Quinſies*, *Peripneumonia*, &c. or *ſudden Evacuations* of the *ſerous*, *nutritious Humours*, in *Vomitings*, *Diarrhœa's*, *Coughs*, *Sweats*, *Diabetes*, &c. or elſe by *Hæmorrhagies*; as *Hæmoptoe*, *Fluxus Menſium*; and moſt of the *Nervous* Diſtempers (like thoſe of other *Glands*) depend on the Admiſſion or Propulſion of *cacochymical Serum* into the *Nerves*; as in *Apoplexies*, *Lethargies*, *Carus*, *Epilepſies*, *Convulſions*, *Vertigo*, *Aſthma*, *Palſies*, *Tympanies*.

All *Tumours* which riſe ſuddenly depend on the *Defluxion* of *Humours* on that part in which they ſtagnate; as *Buboes*, *Eryſipela's*, *Herpes*, &c.

All

All the preceeding Diſeaſes are frequently the Symptoms of an *intermitting Fever*, occaſioned by the *Fevers* agitating, or impelling a particular *Cacochymia* upon ſome Part. If this *Cacochymia*, which diſpoſed the *Blood* to that particular Symptom, be evacuated, or altered by the *Fever*, none of thoſe Symptoms remain; but when the *Fever* is too ſoon ſuppreſſed, thoſe Symptoms become *periodic*, *chronical Diſeaſes*, or at leaſt *Anniverſary*, as appears in the *Aſthma*, *Hemicrania*, and other *Pains*, *Inflammations*, *Convulſions*, or *Evacuations*, which have *periodic Fits*; or, at leaſt, return upon the Changes of the Year, or when any external Cauſes, or hot Medicines, occaſion an *Efferveſcence* in the *Blood*: Then the Symptoms of the former *Fever* appear; and the Cure of the *Defluxions*, depending on a ſuppreſſed *intermitting Fever*, is as followeth;

1. We muſt evacuate the particular *Cacochymia* by *Vomits* and *Purges*; and afterwards it is to be corrected by its particular *Specific* Taſtes, which muſt either raiſe or depreſs the natural *Fermentation* of *Humours*.

2. The Diſpoſition to a *Fermentation* muſt be ſtopt by a *Febrifuge*, as the *Cortex*, for that precipitates by its *Stypticity*, and re-

re-assimilates, by its *Bitterness*, the depraved *Nutritious Serum*, which is the immediate *Ferment* of *intermitting Fevers*.

A *simple Ebullition* of *Blood*, such as happens in *Ephemera's*, is sufficient to produce many *Defluxions* of *Humours*, in which there appears no *Putrefaction* of the *Succus Nutritius*, as in *putrid intermitting Fevers*, which we discern to be *putrid* by a Precipitation of a *high-coloured*, *thick Sediment* in the *Urin*, (which is of a *Brick* Colour, like *Blood* calcined, as Mr. *Boyle* observed) and we call the *Fever* unputrid, when the *Urin* is always *pale*, as in *Ephemera's*, without the former *Sediment*.

When only an *Ebullition* happens in a *cacochymical Blood*, the *Mass* is only agitated or rarefied, (in which is contained the *serous*, *salt Lympha*, the *Chyle* and its *Lympha*, and the whole *Succus Nutritius* of an *Animal*). This *chylous* or *serous* Mixture being lately fermented in the *Stomach*, is, of all the *Mass*, most readily fermented or rarefied; and, again, this *serous*, *nutritious Mass* is more readily circulated into the *Cutaneous*, or remotest Parts of the *Body*, than that *sanguineous* or *red Mass* of the *Blood*, or, at least, more easily secreted through the *Glands* and *Lymphatics*. This is the more immediate subject of an *Ephemera*, or rather an immediate

diate *Ferment*, or occaſion of it, when it is an *irritated Ebullition* by inward Cauſes; as the Fulneſs, or *Acrimony*, of the *Cacochymia*, or depend on the abuſe of the *Six Non-Naturals*. This *nutritious Serum* is not colliquated by the *Fever*, as Authors affirm, (*liquatur & funditur*) for that is only the effect of a *peſtilential Putrefaction*; and the *Serum*, by a violent *Effervescence* in an *intermitting Fever*, becomes more *viſcid*, and *thick*, which diſpoſes it to precipitate, and putrefie; whereas, in an *Ephemera*, the *gentle Heat* can only occaſion an *Effervescence*, as to rarefie the *nutritious Serum*, and drive it through the ſeveral Strainers of the *Glands*, which are appointed for the ſeveral *Cacochymia's*, with which it is ſaturated.

The Signs of theſe *Chronical Defluxions*, depending on an *Ephemera*, are, *pale Water*, like the Healthful at firſt, a *gentle Heat*, a *general Laſſitude*, ſuch as is obſerved in wet Weather, *Heavineſs* in the *Head*, and an *Inclination* to *Sleep*, and *great quantity* of *Water*.

This *Effervescence* depends on the general Changes of the Year. The Alteration of the Weather then produces *irregular Fermentations* in our *Bloods*, as it does *Ebullitions* in *Wines*, and all other *fermented Liquors*; and alſo the Changes of the Wea-

ther at other times, when Rains ſucceed fair Weather, or the Eaſt or North Wind blows after warm Weather, which cauſes the ſame *Ebullition*, both in *Wines* and *Blood*; for by theſe, the Preſſure of the *Air* is altered, the Tranſpiration of our *Bodies* is ſtopt, and the different degrees of *Heat* and *Cold* expand or check the *Rarefaction* of our *Spirits*, by which our *Bloods*, as well as all other *fermented Liquors*, are agitated, depurated, digeſted, or changed; and on theſe external Cauſes the ſudden *Effervescence* of our *Humours* immediately depends; to which, the *Plenitude* of *Humours*, or their *vitious qualities*, *diſorderly*, *hot Diet*, *too much Exerciſe*, *Paſſions*, or other Accidents, very much conduce, which alſo produce *Ephemera's*.

Thoſe Parts of the *Body* are moſt uſually affected with the *Flux* of *Humours*, through which *vitious Humours* ought to be evacuated, or to which the vitiated *Succus Nutritius* can moſt eaſily circulate, or where its Motion is moſt eaſily ſtopt, or moſt frequently, or the *Tone* of a Part vitiated by former Diſtempers.

Though the Occaſion of the *Effervescences*, on which the *Defluxion* depends, be external for the moſt part, yet there is an inward Diſpoſition in the *Blood* to an *Inflam-*

Inflammation, which makes the *Blood* apt to impell its *cacochymical Humours* upon ſome Part. The ſeveral Species of theſe *Defluxions* I will enumerate, according to the Number of the ſeveral *Cacochymia's*, (which I have deſcribed in another Diſcourſe of them) and their Complication with *Intermitting* or *Ephemera Fevers*.

Firſt, If the *Blood*, abounding with a *pituitous Cacochymia*, effervesces, as in an *Ephemera*, it depurates its ſelf from ſome of the *Lacteal Lympha* through the *Glands* of the *Mouth*, or *Lungs*, and, by that *Flux*, produces a *Catarrh*, or much *Coughing*, or *Spitting*, which is always complicated either with an *intermitting Fever*, or an *Ephemera*, which reſembles the *Effervescence* in *Beer* or *Wine*, whereby they clear themſelves of *Barm* or *Lees*.

I have obſerved a *Chin-Cough*, complicated with an *intermitting Fever*, which was cured by the *Cortex* after general *Evacuations*.

If the *pituitous Cacochymia* be tranſmitted to the *Stomach*, it produces *Nauſeouſneſs*, *want of Appetite*, a *pituitous Diarrhœa*, and *Cholics*.

If it is evacuated into the *Trachæa*, or ſtagnates in the *Veſiculæ* of the *Lungs*, it

produces a *Dyſpnœa*, as in the *Cachexies* of Virgins; in whom alſo it produces a *Paleneſs* in the *Skin*, and frequently *ædematous Tumours*, when the *Pituita* ſuffers a *Flux*, according to the Notion of the Ancients; that is, when it is ſuddenly evacuated through the *conglomerate Glands*, or impelled on ſome particular Part where it ſtagnates.

Secondly, If an *Ephemera* be raiſed in a *tartareous*, *acid* Conſtitution, on a ſudden, *corroſive Pains* are produced on the *Membranes*, with *Fluxes* of the *Lacteal Lympha*; as in *Pains* of the *Teeth*, and *Head*; or elſe *Gripes*, or *Pains* in the *Stomach*, are produced.

When the *Blood*, or *Chyle*, and *Lacteal Lympha*, are tinctured with an *acid Cacochymia* (whoſe chief vehicle they be) upon any accidental *Effervescence*, the *viſcid* Parts of the *Serum*, or *ſanguineous Maſs*, may be precipitated by their own *Acidity*, (like *Milk* which is very *ſalt*, and turns into *Poſſet* by boiling); and ſuch kind of *Coagulations* ſeem to happen in *Rheums*, *Fluxes* of *Urin*, *Dyſenteria alba*, or in *ſcorbutic* and *melancholic Salivations*, or *Sweats*, or *Diarrhœa's*.

Thirdly,

Thirdly, If an *Ephemera* be produced by any external Cauſe in a *flatulent Cacochymia*, the *Blood* is tumultuouſly moved with *ſudden Effervescences*, and a *crude* or *acid Windineſs* diſtends the *Hypochondria*, as appears by a *Ructus* of the ſame Nature, *Wandring Pains* may be obſerved in the *Limbs*, *Noiſe* in the *Ears*, *Vertigo* in the *Head*; ſuch are the Diſorders which happen in *Hypochondriac* and *Hyſterical* Perſons, upon the leaſt Occaſion, which excites an *Effervescence* in their *Bloods*.

A remarkable Inſtance of *Windineſs*, complicated with an *Effervescence*, may be obſerved in a *Priapiſm*, which always happens by the *Heat* of the *Bed*, by which the *Flux* of *windy Spirits* is made into the *Penis*; for ſuch Patients uſually complain of *Noiſe* in their *Ears*, of *numbing Pains* in the *Hands* and *Arms* in their *Sleep*, and their *Sides*, which goes off with a *prickling* and *tingling Pain* upon Waking; and as the *Erection* ſubſides, a Noiſe is heard in the *Belly*, and *Wind* breaks forth in a *Crepitus*, and a *Deadneſs* or *Numbneſs* remains in the Part, as well as many other Parts of the *Body*.

Fourthly, If the *Serous Cacochymia* be agitated by an *Ephemera*, *Tumours* happen in the *Limbs* ſuddenly, which are *pure*, *watery*,

watery, *hydropical Tumours*, or elſe the *Serum* is ſuddenly evacuated into the *Cavities* of the *Head*, *Breaſt*, *Belly*, *Scrotum*, or *Teſticles* of Women, of which, Caſes are mentioned by the Ingenious *Carolus Piſo*, *de Morbis à ſeroſâ colluvie*; but he ſeems miſtaken in this Deſcription of the *Serum*, as if it were only *Aqua pura puta*, becauſe the *Serum* contains the *nutritious*, *fibrous* or *caſeous* Parts of the *Chyle*, as well as its *watery Elements*. *Piſo* mentions an *Hydrocephalos* which returned by *Fits*, and that cannot but depend on an *Effervеſcence* in the *Blood*; it was cured by him by *Purges*, and a *Lixivium* to waſh the *Head*.

He alſo relates a Caſe of *Sleepineſs*, with *Pains* on the *Head*, depending on a *ſerous Blood*; and that increaſed towards Night, which was cured by an actual *Cautery* applied to the hinder part of the *Head*.

He mentions a *Carus*, with a *Fever* depending on the *Serum* paſſing the *Brain*, to which Children are moſt ſubject; this was purged off the Ninth Day; and he believes *Nocturnal Convulſions* to depend on the *Serum* impelled into the *Nerves*.

The *conglobate Glands*, deſigned for the Paſſage of the *Serum*, are frequently ſwelled by an *Effervеſcence* depurating or impelling the *Serum*; and when the *Urin*, which ought

ought to be tranſcolated from the *Serum* by the *Kidnies*, is ſuppreſſed, a *Sleepineſs* ſeizes the *Head*, or gripes the *Belly* from the *Serum* tranſlated to that Part.

The great Quantity of *Serum* is uſually imputed either to the Quantity of *ſerous* Diet, or the Retention of its *Evacuation*.

Fifthly, An *Ephemera* in a *bilious* State of *Blood* occaſions the *Jaundices*, by a ſudden Tranſlation of the *bilious Serum* into the *Skin*, or elſe it is evacuated into the *Stomach* in a *Cholera*, or the *Inteſtines* in a *Diarrhœa*.

If the *Serum* be both *viſcid* and *bilious*, it produces an *Eryſipelas* with a *Fever*.

Piſo deſcribes an *Hemicrania*, which returns upon the Changes of the Year, and Alterations of the Weather, to wet, with *Vomiting* of *bilious Serum*, *Inclination* to *Sleep*, and *Convulſive Pains* in the *Belly*, and the *Pains* in the *Head* preceed thoſe in the *Belly*; the *Pulſe* and *Thirſt* ſhew the *Fever*; and he concludes, *ſudores ſunt remedium Hemicraniæ, prophylacticum, & præcipuum, & ſeri evacuatione, curatur.* An exquiſite *drying Diet*, and an *Oxyrrhodine* applied to the *Head* helps much.

Sixthly, In a *ſcorbutic*, *ſalt Blood*, a ſimple *Effervеſcence* produces the *ſcorbutic Spots*, or

or *Bliſters* in the *Skin*, which ſuddenly appear, and ſubſide again, and all other *ſcorbutic Pains* depend on a ſudden *Effervescence*, which make the *Urin high-coloured*.

In a *ſalt Blood* this ſimple *Effervescence*, uſually called an *Ephemera*, produces divers *Pains* and *Inflammations*; as the *Tooth-Ach*, *Ophthalmia*, *Otalgia*, *Gout*, *nephritic Pains*, (which uſually happen in Autumn) and a *Fever* uſually goes along with all *Pains*, which excite *ſymptomatic Fevers*, and that is always referred to the Claſs of *Ephemera's*.

If the *ſalt Serum* be inclinable to *ſtony* or *ſandy Coagulations*, an *Effervescence* of the *Blood*, tinged with that *Humour*, produces the *Gout*, and *ſtone Fits*. This *Effervescence* preceeds the *Gout* ſome Days, with a *Laſſitude* in the *Limbs*, and *Heavineſs* of the *Body*, and a *preternatural Heat*, *Watching*, *Thirſt*, *Nauſeouſneſs*, and a *Dryneſs* on the *Tongue*. This *Effervescence* or *Fever* laſts uſually 30 or 40 Days, which is the common Term of great *Fluxes* and acute *Fevers*. This *Fever* has *Exacerbations* towards Night, and remits in the Morning; but the Ingenious *Piſo* thinks it to be *Febris imputris, ſynocha legitima, potius quam putris, quæ dolores arthriticos comitatur*.

The *Effervescence* in the *Blood* of *Gouty* Perſons forces the *ſalt Serum* upon the ner-

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vous Parts of the *Joynts*, through their *Glands*, whereby the *acute Pains* of the *Gout* are produced, and the *convulsive Cramps* preceeding the *Fit*. The *Water* is *pale* in the beginning, and afterwards *high-coloured*, with *thick Sediment*.

The *Fit* of the *Gout* is cured as usual. *Fluxes* depending on an *Ephemera*, by *Bleeding* once or twice, by *Glysters*, and *Opiates*, and by a *thin, spare Diet* for the three first Days, or a *perfect Abstinence*; but afterwards *Water-Gruel, Chicken-Broth, Sack-Posset-Drink*: After a Week, when the *Fever* and *Pain* decline, which will appear by the *Urin*. *Purging* agrees well, by some *Lenitive*; as *Decoct. Senæ*. An *Anodyne Poultess* at first must be laid to the Part, and afterwards *Discutients* and *Nervines* are necessary.

For the Preventing the *Fit*, frequent *Vomitings* once in a Month, *Purging* with *Rhubarb* three Days before the Full and Change of the Moon, and three Days after them. A *spare Diet*, and Abstinence from all *strong Liquors*, with *moderate Exercise*, are absolutely necessary.

All *hot Arthritics* are Injurious in the *Fit*; as *Theriaca, Sp. C. cervini, Guaicum*: And it is a general Errour of Practisers, to prescribe *hot Specifics* during the *Effervescence*, which occasions a *Defluxion*; but they are more

more properly uſed in the *Intervals* of the *Fit*, to correct the *Cacochymia*; and we find too long uſe of them occaſions a *new Effervescence* and *Defluxion*. *Bitters* help the Digeſtion of the *Arthritic*; and Drinking *Bath-Waters* cures the *Saltneſs* of their *Bloods*, or elſe *Aſſes Milk* alters the *Saltneſs*.

Seventhly, If the *Serum* be both *ſalt* and *viſcid*, and by any Accident effervesces, *Hæmorrhagies* are produced at the *Noſe*, *Lungs*, *Arms*, *Womb*, which are accompanied with a *feveriſh Effervescence*. And we may obſerve, that *Bleeding*, the *Cortex*, *Opiates*, and *cool antiſcorbutic Juyces*, and Abſtinence from *fermenting Liquors*, by abating the *Fever*, cure more ſucceſsfully than any *Styptics* whatſoever.

If the *Effervescence* be in a *viſcid Blood* only, it produces *Rheumatiſms*, *Pains* of the *Hips*, *Shoulders*, *Loyns*, *Knees*, *Head*, as in the *Hemicrania*; but that of the *Muſcles* generally is called a *Rheumatiſm*; but if it fall inwardly, it is a *Pleuriſie*, or *Peripneumonia* when it affects the middle Region; if on the *Kidnies*, it makes a *Nephritis*; if on the *Brain*, externally a *Lethargy*, or more internally an *Apoplexy* on the *Nerves*, a *Paralyſis* on the *Guts*, a *Cholic*, on the *Eyes* *Ophthalmia*, &c. In all the fore-mentioned

Caſes

Caſes there is an *Effervescence* preceeding the *Pains* and *Inflammations*, as appears by the *Chillneſs* and *Shivering* which firſt ſeizes them in the beginning of thoſe Diſeaſes, which ſoon are ſucceeded by *burning Heats*, *high-coloured Water*, and *quick Pulſe*.

Eighthly, A *febrile Effervescence* in a *melancholic* or *vitriolic* State of *Blood*, is the Occaſion of the following Diſeaſes.

1. *Hot Pains*, and *Windineſs* in the *Stomach* and *Guts*, from a *hot Windineſs*.

2. *Pains* in the *Spleen*, and *Sides*, and *Limbs*, from a *windy Spirit*.

3. In the *Nerves* the *windy Spirits* produce *Palpitations* of the *Heart*, *want* of *Sleep*, *Sinking* of the *Spirits*, and divers kind of *Convulſions*; as *Hyſteric Fits*, *Epilepſies*, and all the *Inflations* of the *Nervous Parts*; in the *Aſthma*, *Tympany*, *Ephialtes*, *Priapiſmus*. All which depend on a ſimple *Ebullition* of *Humours*.

The immediate Cauſe of the *Aſthma*, is the *Conſtriction* of the *Trachæa*, or *Bronchia*, which ſtreightens the *Paſſage* of the *Air*, and produces the *Wheezing*; and the *Veſiculæ* of the *Lungs* being alſo contracted, a *laborious Inſpiration* is neceſſary to force the *Air* into the *Lungs*.

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There being no *Tumour*, *Inflammation*, or *Pain*, in the *reſpiratory Muſcles*, they cannot occaſion the *Aſthma*; but in pure *convulſive* Caſes, in which they often produce a *Dyſpnæa*.

The *Fit* of the *Aſthma* happens ſuddenly, through the *Efferveſcence* of *Blood*, occaſioned by external Cauſes, which ſeparate the *Lympha Lactea* from the *Blood*, and that ſtops in the *ſwelled Glands* of the *Lungs*, and is at length evacuated into the *Trachea*. In the *ſpitting Aſthma*, and in the *Hyſteric*, the *Serum* of the *Blood* ſeems to be forced into the *Nerves* by this *Efferveſcence*; or into the *Lymphatics* of the *Lungs*, where, by Stagnation, it may irritate the *Fit*.

Though the *Water* be *pale*, and the *Pulſe low*, and the *Extremities cold*, yet the *Aſthmatic Fever* is evident, for they have an inward Senſe of *Heat*, and great *Reſtleſsneſs* of *Spirits* in the *Fit*. *Cælius Aurelianus* obſerves, in his Deſcription of the *Aſthma*, the *Fervor Igneus*, and a *Color Morbidus*, though the *Aſthma* is not always joyned with a *Fever*. I have obſerved the *Aſthma*, frequently joyned with an *Inflammation* of the *Lungs*, or *intermitting Fever*, and at all other times with an *Ephemera*, which appears by the general *Laſſitude*, *Oppreſſion* of the *Breaſt* and *Head*, *want* of *Sleep*, *Thirſt*, and thoſe Cauſes which excite

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an *Ephemera*, produce the *Aſthma*; as *extream Heat* or *Cold*, the *Dog-Days Heat*, in which *Wines* are apt to ferment; and whatſoever produces an *inflammatory Diſpoſition* in the *Blood*, produces the *Aſthma*; as *high Diet*, *ſtrong Wines*, *all hot Pectorals*, or *Digeſtives*, or *anti-Convulſive Medicines*, *Steel*, or *ſtrong Purges*; *hot Diaphoretics*, or *Febrifuges*, which, by exciting an *Effervescence*, increaſe, and produce the *Aſthma*, and cannot cure it: But whatſoever cures the *Ephemera*, cures alſo the *Aſthma Fit*; as *Bleeding*, *Clyſters*, *Opiates*, *cool Pectorals*, with *Ol. Sulphuris*, *Sal Prunell. Gas Sulphuris*, *Milk-Waters*, *thin Emulſions*, *Ptyſans*. For the Preventing a *new Fit*, theſe Two Indications muſt be reſpected.

1. To cure the *mucilaginous*, *ſerous* and *flatulent Cacochymia* by *Vomits*, *Purgers*, and *Digeſtives* of *ſpecific* Taſtes, contrary to the mentioned *Cacochymia's*; as *Alteratives*, or *Diuretics*, or *Sudorifics*, as *Decoction* of the *Woods*.

2. To prevent the *ſudden Effervescence* of the *Blood*, by avoiding *Fulneſs*, and Variety of *Meats*, and all *ſtrong*, *fermented Liquors*, which produce frequent *Effervescences* of our *Humours*; and to remember *Piſo's* Caution, *Parciſſime Bibendum*; for after Drinking our *Horſes* are moſt *Aſthmatic*; and for Avoiding the Watering of them, we wet their *Hay*.

Thoſe *cool Febrifuges*, which cure the *Effervescence* in the *Fit*, ſeem proper to prevent the Return; but we muſt not always rely on the *Cortex*, for that does not ſucceed ſo well in the *Spitting*, as *hyſteric Aſthma*; but, in many Caſes, a Draught of *fair Water* with a *Toaſt*, or a Draught of *Pectoral Drink* with *Gas Sulphuris*, three Days before the New and Full Moon, and three Days after them, may be given in the Morning to prevent the *Fit*.

Sarſa Drink and *Lucatellus's Balſam* beſt cleanſe the *Lungs* in the *ſpitting Aſthma* after the *Fit*.

If an *Inflammation* of the *Lungs* be joyned with the *Aſthma Fit*, *Bleed* three or four times, give *Emulſions*, *Pectoral Drinks*, *Oyly Mixtures*, and *Laudanum*, and a *Decoction* of the *Cortex*, which may be mixed with that of the *Pectoral Drink*; and *Gas Sulphuris* a Spoonful may be given in a Draught of *Pectoral Drink* to cool. After fourteen Days *Purge* with *Decoct. Senæ* and *Manna*; after which repeat the *Laudanum* and *Cortex* again; and, at laſt, for *Cleanſing* the *Lungs*, *Lucatellus's Balſam*, and *Decoct. Sarſæ*; and this Method I have found very ſucceſsful.

All other *Aſthma's* depending on the *Tubercula* of the *Lungs*, or *Collection* of *Matter*, *Serum*, *Blood* in them, or the *Cavities* of the *Breaſt*, as alſo that on the *Gibboſities*, or *ill Formation* of the *Thorax* in the *Rickets*, or

Tumours

Tumours of the *Viſcera*, are improperly called *Aſthma's*.

Though they produce an *Ephemera* by Stopping the *Nutritious Serum* in its Circulation, yet they have an evident Cauſe which requires to be removed before they can be cured.

Children ſubject to *Rheums*, with *ſcabbed Heads*, if that be ill cured or repelled, they become *Aſthmatic*, with *Returning Fits* about the *Solſtices* and *Æquinoctials*. In this Caſe all the Methods for *Scald Heads* muſt be uſed; as *Decoct. Sarſæ*, *Mercu. Dulcis*, *Bath-Waters*, *Sulphur Medicines*, *Vitriolic Waters*; but theſe generally diſ-agree with the *Aſthmatic*; and by giving them a *Catarrh*, produce the *Fit*; and much Drinking of *Fountain-Water* produces *Dropſies* in the *Lungs*, to which they are ſubject.

Ammoniacum Medicines, uſed to ſome Ounces, much help the *Viſcidity* of a *mucilaginous Slime* in the *Lungs*; but that, and the *Cortex*, has failed me, when the *Blood*, by an accident, as the Uſe of the *Bath*, is made more than ordinary prone to an *Effervеſcence*; and all *high Diet* and *ſtrong Liquors* make all *Specifics* ineffectual, till the *Aptitude* to an *Effervеſcence* be taken off by *Bleeding*, *Vomiting*, *Purging*, or, above all, by a *cool*, *thin Diet*, and Abſtaining from *fermented Liquors*,

by which Method, my *Aſthma* has intermitted three or four Months, which before was rather irritated by all other Medicines this Winter.

The Anointing the *Breaſt*, and keeping it *hot*, or *rubbing* it, and *Cupping-Glaſſes*, and all *hot Medicines*, were the Errours of the Ancients; but, as the *Fit* declines, the *Pectorals* are neceſſary to deterge the *Phlegm*; and the *Drymphagia*, which *Cælius Aurelianus* mentions, is very proper to help *Expectoration*. He commends *Acetum Scylliticum* before *Meat*, and *Nitre* with *Vinegar*, *Decoction* of *Hyſſop* and *Figs*, *Pine-Nuts* with *Mulſum*, *Turpentine* with *Honey* or *Nettle-Seeds*, or *Creſs-Seeds* with *Honey* or *bitter Almonds*.

He recommends *Travelling* or *Navigation*, the Drinking *Bath-Waters*. In *Italy* they uſe *Theriacæ Antidoti*. And he alſo recommends the *cold Immerſion*, *Vtilis conſuetudo frigidi lavacri, quam Pſeucroluſian appellant*. He mentions *Cataclyſmus ſive illiſio aquarum ſuperne iiſdem locis, qui patiuntur*. But though the Pumping of the *Breaſt* may give the *ſcorbutic* or *hypochondriac* Symptoms ſome Eaſe, yet they rather do Injury for the future. He orders the *Aſthmatic*, *Jacere altioribus ſtramentis, thorace & capite ſublevato, loco lucido atque calido mediocriter. Adhibitâ requie & abſtinentiâ cibi uſque ad tertium diem ſi vires permiſerint*. He diſlikes *ſtrong Purges* of *Diagrydium*,

grydium, and the *Spurges*. He mentions *Caſtor* to be uſed in and out of the *Fits*, which probably they uſed for the *hyſteric Aſthma*; but that, I fear, cannot cure them without *Laudanum*, and the *Cortex*.

I believe the *Old Oxymels*, with proper *Evacuations*, have cured more *Aſthma's* than the *Moderns*, by their *anti-Convulſives*; for the Notion of the *Aſthma*, being a *Defluxion* of *Humours*, when clearly ſtated, gives very true and uſeful *Indications*; whereas the *Convulſive Inflations* are Symptoms of the *Effervescence* only; and all the Medicines deſigned for the Cure of the *Convulſive* Symptoms, by increaſing the *Effervescence*, occaſion more frequent *Fits* of the *Aſthma*, and cure none.

Ninthly, An *Ephemera*, in a *putrid* State of *Blood*, produces the *Impetigo*, *Scab*, *Scald Head*, which are, by an *Effervescence*, thrown into the *Skin* Spring and Fall, as common Experience informs us.

The Cure of the *ſimple Effervescence*, which is generally called an *Ephemera*, though it ſometimes laſts Thirty or Forty Days, is in the following manner.

I. By *Bleeding*: for *Veſſels* full of *Liquors* are moſt apt to ferment; and, therefore, upon the Fermenting of *Wines*, we draw off ſome of the *Liquor*; and for Preventing the *Ebulli-*

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tions, ſome part of the *Veſſels* is left empty; and the ſame effect *Bleeding* has, which is done in proportion to the *Fulneſs*, and by that we check *Fluxes*, *Pains*, *Inflammations*, which depend on the *Ebullition* of our *Humours*.

II. By *Glyſters*: at firſt the *fermenting Maſs* in the *Guts* is drawn off, which reſembles the *Lees* in *Wines*, that occaſion frequent *Fermentations*.

III. *Specific Purges*, (after ſeven, eight, nine or fourteen Days) when the *Ebullition* remits, are neceſſary to evacuate the *Fulneſs* of ſome particular *Cacochymia*.

IV. All *Diuretics* ought to be cool; as *Decoct. Pectoral*, *Rad. Graminis*, *Cichorei*, *Liquiritiæ*, *Decoct. Sarſæ*, *Chinæ*, *Raſ. Eboris*, *C. cervini*, *Emulſions*.

All *hot Specifics* irritate the *Fever*.

V. *Ante-febrile Medicines* check the *Ebullition*. As,

1. *Styptics*, which hinder the *Ebullition* of *Blood*, as well as the *Fluxes* of *Humours*. *Decoct. Corticis* mixed with any *ſpecific Decoctions*. The *Powder* of *Acorns* allays the *Pains* and *Inflammations* in *Pleuriſies*.

2. *Acids*, *Ol. Sulph. cum Conſerv. Ros. Gas Sulphuris*, *Sal Prunell.* in *Pectoral Drinks*.

3. *Opiates*, which ſuppreſs the *expanded Spirits*, that produce the *Nervous Inflations*.

VI. All

VI. All *Pains* muſt be treated with *Anodynes*, and *Tumours* diſcuſſed, and *Fluxes* ſtopped by proper *Specifics*.

VII. The *Diet* muſt be *thin*, ſuch as is in *Fevers*; or perfect Abſtinence for one or two Days is very neceſſary to cure the *Effervescence*.

For the Preventing the return of theſe *Effervescences*.

1. The *Cacochymia* muſt be evacuated by *Vomits* repeated Monthly, or Quarterly; by *Purges* once in fourteen Days, and an *Opiate* the Night after; by *Bleeding* Spring and Fall; by a long uſe of *Specifics*, for the ſeveral *Cacochymiæ*: And *moderate Exerciſe*, and a *cooling, ſpare Diet*, is neceſſary to prevent that *Fulneſs* of the *Succus Nutritius* which produces the *Ebullition* in *Chronical* Caſes.

2. The *inflammatory Diſpoſition* of the *Blood*, and its *Effervescence*, muſt be checked by the *cool Febrifuges* above-mentioned; by the *Decoction* of the *Cortex* at the Changes of the Year; or that of the Moon, when the *Fluxes* or *Fits* uſually happen; or *Gas Sulphuris* for three Days before and after the Changes of the Moon, when the Alterations commonly happen in the Weather, which excites the *Effervescence*, and eſpecially in the extream hot Time of the *Dog-Days*, when *Wines* are moſt apt to ferment, and when the

the *intermitting Fevers* begin; and, by the Observation of all *Asthmatics*, that is the worst time of the Year for the *Asthma*.

The *inflammatory Disposition* of the *Blood* is best cured by the *cool Juyces* of *Herbs*; as *Dandelion*, *Brooklime*, *Sorrel*, *Water-Cresses*, *Milk-Waters*, *Sarsa-Drinks*, *Whey*, *Milk* and *Water*, Abstaining from *Mault Drinks*, or by the *cold Immersion*.

3. The *Tumour* of any Part, or the *Obstruction* in its *Vessels*, or the *Weakness* of its *Tone*, must be cured, that it may become less subject to *Defluxions*.

4. All *external Accidents* must be avoided, which may excite an *Ephemera*; but chiefly *hot Diet*, *strong Drinks*, and *Tobacco*; and, if possible, all *fermented Liquors*, and *full Meals*, and *Changes* of *Weather*.

FINIS.